



OCTOBER 16-21, 2011
HILTON NEW YORK
NEW YORK, NY

part of



Conference Preview



www.predictiveanalyticsworld.com/newyork

KEYNOTE SPEAKERS



Thomas Davenport
President's Distinguished Professor,
Babson College,
Author, *Competing on Analytics*



Eric Siegel
Conference Chair
Predictive Analytics World



David A. Ferrucci
IBM Fellow & Watson Principal Investigator
IBM Research

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PREDICTIONIMPACT
Predictive Analytics for Business and Marketing

Dear Analytical Innovators and Practitioners,

I invite you to join us for Predictive Analytics World, the business-focused event, loaded with predictive analytics case studies, expertise and resources. This conference brings professionals and experts together in order to keep predictive analytics deployment moving forward, strengthening the impact it delivers and establishing new opportunities.

Predictive Analytics World is the leading cross-vendor, cross-industry event, delivering sessions from verticals such as banking, financial services, e-commerce, education, government, healthcare, high technology, insurance, non-profits, publishing, social gaming, retail and telecommunications

PAW's NYC 2011 program is the richest and most diverse yet, featuring over 40 sessions across 3 tracks: 1) "All Audiences", 2) "Expert/Practitioner", 3) "Financial Services"-- so you can witness how predictive analytics is applied by ACE Cash Express, Blue Cross, Charlotte-Mecklenburg Police Dept, Citibank, Cox Communications, Fidelity, GE Capital, Heritage Provider Network, Infinity Insurance, Intuit, LinkedIn, Match.com, Microsoft, New Directions Behavioral Health, New South Wales Government, Overstock.com, Paychex, Inc., PayPal, Rebellion Research, United Group Holdings, USPS Office of Inspector General, YMCA, a top 5 international bank, a top global retailer, and three major US banks, plus insights from projects for Anheiser-Busch, the SSA, and Netflix.

PAW's agenda covers hot topics and advanced methods such as *black box trading, churn modeling, crowdsourcing, demand forecasting, ensemble models, fraud detection, healthcare, insurance applications, law enforcement, litigation, market mix modeling, mobile analytics, online marketing, risk management, social data, supply chain management, targeting direct marketing, uplift modeling (net lift), and other innovative applications that benefit organizations in new and creative ways.*

Join PAW and access our premier keynotes, sessions, workshops, exposition, expert panel, live demos, networking coffee breaks, and reception.



Eric Siegel, Ph.D.
Program Chair
Predictive Analytics World



New to Predictive Analytics?

If you're new to the field, kicking off a new initiative, or exploring new ways to position it at your organization, there's no better place to get your bearings than Predictive Analytics World. See what other companies are doing, witness vendor demos, participate in discussions with the experts, network with your colleagues and weigh your options!

Access the free online Predictive Analytics Guide: pawcon.com/guide

- Track 1 sessions are for all levels. ▲ Track 2 sessions are expert/practitioner level.
- § Track 3 sessions cover Financial Services Applications.

Pre-Conference Workshop: Sunday, October 16, 2011

1:00 -5:00pm

▲ **Half-day Workshop**
R Bootcamp: for Newcomers to R
 Max Kuhn, Director, Nonclinical Statistics, Pfizer

Pre-Conference Workshop: Monday, October 17, 2011

9:00am-4:30pm

● **Full-day Workshop**
Predictive Analytics: Fundamentals and Use Cases
 Piyanka Jain, Head of NA Business Analytics, PayPal
 Puneet Sharma, Senior Manager, PayPal

▲ **Full-day Workshop**
R for Predictive Modeling: A Hands-On Introduction
 Max Kuhn, Director, Nonclinical Statistics, Pfizer

Pre-Conference Workshops: Tuesday, October 18, 2011

9:00am-4:30pm

● **Full-day Workshop**
Driving Enterprise Decisions with Business Analytics
 James Taylor, CEO, Decision Management Solutions

● **Full-day Workshop**
Hands-On Business Analytics: Insights to Impact
 Piyanka Jain, Head of NA Business Analytics, PayPal
 Puneet Sharma, Senior Manager, PayPal

▲ **Full-day Workshop**
Hands-On Predictive Analytics with SAS Enterprise Miner
 Dean Abbott, President, Abbott Analytics

DAY 1: Wednesday October 19, 2011 • Exhibit Hall Open - 10:00am-7:30pm

7:30-9:00am

Registration & Breakfast

9:00-9:45am

Keynote: Persuasion by the Numbers: Optimize Marketing Influence by Predicting It
 Eric Siegel, Ph.D., Program Chair, Predictive Analytics World

9:45-10:05am

Diamond Sponsor Presentation

10:05-10:15am

Platinum Sponsor Presentation

10:15-10:45am

Break / Exhibits

● **Track 1 All Levels**

▲ **Track 2 Expert/Practitioner**

§ **Track 3 on Financial Services**

Insurance Applications

Survey Analysis

e-Commerce: Thought Leadership

10:35-11:05am

● **Case Study: Infinity Insurance Next Generation Claims Systems**
 James Taylor, Decision Management Solutions

▲ **Case Study - YMCA Turning Member Satisfaction Surveys into an Actionable Narrative**
 Dean Abbott, Abbott Analytics & Bill Lazarus, Ph.D., Seer Analytics, LLC

● **Case Study: PayPal / eBay Putting Predictive Analytics into Context: The Analytics Value Chain**
 Piyanka Jain, PayPal & Puneet Sharma, PayPal

11:10-11:30am

Gold Sponsored Presentation

11:35am-12:20pm

Multiple Case Studies: Anheuser-Busch, the SSA, Netflix Data Mining Lessons Learned - Technical & Business - From Applied Projects
 John Elder, Ph.D., Elder Research

12:20pm-12:35pm

Lightning Round of 2-minute Vendor Presentations

12:35pm-1:35pm

Birds of a Feather Lunch / Exhibits

● Track 1 sessions are for all levels. ▲ Track 2 sessions are expert/practitioner level.
 \$ Track 3 sessions cover Financial Services Applications.

DAY 1: Wednesday October 19, 2011 • Exhibit Hall Open - 10:00am-7:30pm			
	● Track 1 All Levels	▲ Track 2 Expert/Practitioner	\$ Track 3 on Financial Services
	Thought Leadership	Demand Forecasting	Risk Management
1:35pm-1:55pm	● Case Study: LinkedIn Data Science at LinkedIn: Iterative, Big Data Analytics and You Manu Sharma, LinkedIn	▲ Case Study: Cox Communications What Happens Next? Automated Smart Demand Forecasting Bob Wood, Cox Communications	● Case Study: ACE Cash Express Credit Risk Analytics Framework for Subprime Loans Senthil Ramanath, ACE Cash Express
2:00pm-2:20pm		Forecasting (Per-Product); Retail	Direct Marketing New Products
2:25pm-3:10pm	Keynote on Jeopardy-Winning Watson and DeepQA David A. Ferrucci, Ph.D., IBM Fellow & Watson Principal Investigator, IBM Research		
3:10pm-3:30pm	Diamond Sponsor Presentation		
3:30pm-3:40pm	Platinum Sponsor Presentation		
3:40pm-4:15pm	Break / Exhibits		
	● Track 1 All Levels	▲ Track 2 Expert/Practitioner	\$ Track 3 on Financial Services
	Crowdsourcing Data Mining; Healthcare	Lab Session	Uplift Modeling
4:15pm-5:00pm	● Case Study: Kaggle Predictive Modeling Competitions and the Heritage Health Prize Anthony Goldbloom, Kaggle	▲ Lab Session: Live Topical Demo	● Speaker from: Fidelity True-Lift Modeling: Mining for the Most Truly Responsive Customers & Prospects Jane Zheng, Fidelity
5:00pm-5:25pm	Break / Exhibits		
	Healthcare	Market Mix Modeling	Survey Analysis & Churn Risk Detection
5:25pm-5:45pm	● Case Study: Blue Cross & New Directions Behavioral Health They Keep Coming Back-Predicting Hospital Readmissions Fred Grunwald, New Directions Behavioral Health	▲ Case Study: TBA Methods for Market Mix Modeling Explained Donald Cozine, ANALYTICI	● Case Study: Identifying Customers Who Expressed Intend-to-Churn or Defect from Large Number of Surveyed Verbatim Han Sheong Lai, PayPal
		Crowdsourcing Data Mining; Retail	Financial Indicators from Social Media
5:50pm-6:10pm	● Gold Sponsored Presentation	▲ Case Study: Overstock.com. The RecLab \$1 Million Prize on Overstock.com: Driving Innovation with Live Data in the Cloud. Darren Erik Vengroff, Ph.D., RichRelevance	● Social Media Analysis for Market Prediction: Collective Mood States and the Wisdom Crowds Johan Bollen, School of Informatics and Computing, Center for Complex Networks and System Research, Indiana University
6:10pm-7:30pm	Reception / Exhibits		

- Track 1 sessions are for all levels. ▲ Track 2 sessions are expert/practitioner level.
- § Track 3 sessions cover Financial Services Applications.

DAY 2: Thursday October 20, 2011 • Exhibit Hall Open - 10:00am-4:30pm

8:00-9:00am	Registration & Breakfast		
9:00-9:45am	Expert Panel Wise Enterprise: Best Practices for Managing Predictive Analytics		
9:45-9:55am	Platinum Sponsor Presentation		
9:55-10:15am	Lightning Round of 2-minute Vendor Presentations		
10:15-10:25am	Industry Trends 2011 Data Miner Survey Results: Highlights Karl Rexer, Ph.D., Rexer Analytics		
10:25-10:55am	Break / Exhibits		
	● Track 1 All Levels	▲ Track 2 Expert/Practitioner	§ Track 3 on Financial Services
	Thought Leadership	Fraud Detection	Mobile Analytics
10:35-11:20am	● Case Study: Microsoft Mattering More at Microsoft: Converting Insights into Better Business Results Joseph LaCugna, Ph.D., Microsoft	▲ Case Study: U.S. Postal Service Office of Inspection General Fighting the Good Fraud Fight Antonia de Medinaceli, Elder Research, Inc.	● Case Study: Citibank Predictive Analytics in Customer Digital Payments Ramendra Sahoo, Ph.D., Citibank
	Mobile Analytics & Search	Lab Session	Fraud Detection
11:20-11:40am	● Case Study: Microsoft Mobile Search Advertising & the Importance of Data in Understanding Customer Intent Will Dannenberg, Microsoft & Dhiraj Rajaram, Mu Sigma	▲ Lab Session: Live Topical Demo	● Case Study: 3 Major US Banks Developing Business Cases for Banking Fraud Detection Kurt Gutzmann, Gutzmann Consulting Group LLC
11:45am-12:30pm	Special Plenary Session The Future of Targeting and On-Line Marketing – Predictive Analytics on Big Data Usama Fayyad, Ph.D., Chairman & CTO of ChoozOn Corporation, Former Chief Data Officer, Yahoo!		
12:30pm-1:30pm	Birds of a Feather Lunch / Exhibits		
1:30pm-2:15pm	Keynote: Every Day Analytics: Making Leading Edge Commonplace Thomas Davenport, President's Distinguished Professor, Babson College, Author, Competing on Analytics: The New Science of Winning		
2:15pm-3:00pm	Break / Exhibits		

● Track 1 sessions are for all levels. ▲ Track 2 sessions are expert/practitioner level.
 \$ Track 3 sessions cover Financial Services Applications.

DAY 2: Thursday October 20, 2011 • Exhibit Hall Open - 10:00am-7:30pm

	● Track 1 All Levels	▲ Track 2 Expert/Practitioner	\$ Track 3 on Financial Services
	Lab Session	Law Enforcement	Retention with Churn Modeling
3:00pm-3:20pm	● Lab Session: Live Topical Demo	▲ Case Study: CMPD Law Enforcement Analytics Solution Helps Identify Potential Criminal Activity Robert Broughton, Charlotte- Mecklenburg Police Department	● Speaker from: GE Capital Using Segmentation and Predictive Analytics to Reduce Customer Attrition David Liebskind, GE Capital
3:25pm-3:45pm		Law: Forecasting for a Legal Defense	
3:45pm-4:30pm	Break / Exhibits		
	● Track 1 All Levels	▲ Track 2 Expert/Practitioner	\$ Track 3 on Financial Services
	Retention with Churn Modeling	Social Data	Black Box Trading
4:30pm-4:50pm	● Case Study: Paychex, Inc. Combat Client Churn with Predictive Analytics Frank Fiorille, Paychex, Inc.	▲ Case Study: Match.com Search and Social: Intelligent Matching at Match.com Amarnath Thombre, Match.com	● Case Study: Rebellion Research Humans, Rules & Machine Learning: Three Prediction Paradigms Spencer Greenberg, Rebellion Research
4:55pm-5:15pm	● Case Study: United Group Holdings Value Proposition Segmentation (VPS) Method Amjad Zaim, Ph.D., Cognitro Analytics	▲ Network Maps for End Users: Collect, Analyze, Visualize and Communicate Network Insights with Zero Coding Marc A. Smith, Ph.D., Connected Action Consulting Group	

Post-Conference Workshop: Friday, October 21, 2011

9:00am-4:30pm	▲ Full-day Workshop The Best and the Worst of Predictive Analytics: Predictive Modeling Methods and Common Data Mining Mistakes John Elder, Ph.D., Elder Research	▲ Full-day Workshop Developing User-Friendly Predictive Analytics: Delivering Results to Business Users with Interactive Applications Jeff Mergler, TIBCO Spotfire
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Sunday, October 16, 2011 Half-Day Workshop

1:00pm - 5:00pm

R Bootcamp: For Newcomers to R



Instructor: Max Kuhn,
Dir. Nonclinical Statistics,
Pfizer

Intended Audience: Practitioners who wish to learn the nuts and bolts of the R language; anyone who wants "to turn ideas into software, quickly and faithfully."

Knowledge Level: Experience with handling data (e.g. spreadsheets) or hands-on familiarity with any programming language.
Workshop Description

This half-day workshop launches your tenure as a user of R, the well-known open-source platform for data analysis. The workshop stands alone as the perfect way to get started with R, or may serve to prepare for the more advanced full-day hands-on workshop, "R for Predictive Modeling," which takes place the immediately following day.

Designed for newcomers to the language of R, "R Bootcamp" covers the R ecosystem and core elements of the language, so you attain the foundations for becoming an R user. Topics include common tools for data import, manipulation and export, as well as several of the graphical systems in R, such as LATTICE and GGLOT.

The instructor, a leading R developer and the creator of six R packages, including CARET, a core R package that streamlines the process for creating predictive models, will guide attendees on hands-on execution with R, covering:

- A working knowledge of the R system
- The strengths and limitations of the R language
- Core language features
- The best tools for merging, processing and arranging data
- Visualization: Exploratory Data Analysis (EDA), and tools that persuade

Hardware: Bring Your Own Laptop

Each workshop participant is required to bring their own laptop running Windows or OS X. The software used during this training program, R, is free and readily

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available for download.

Attendees receive an electronic copy of the course materials and related R code at the conclusion of the workshop.

Schedule

- Workshop starts at 1:00pm
- Afternoon Coffee Break at 2:30pm - 3:00pm
- End of the Workshop: 5:00pm

Monday October 17th, 2011 Full-Day Workshop

9:00am - 4:30pm

Predictive Analytics: Fundamentals and Use Cases



Piyanka Jain,
Head of NA Business Analytics,
PayPal



Puneet Sharma,
Senior Manager,
PayPal

This workshop is designed to prepare newcomers to attend Predictive Analytics World's 2-day conference program.

Intended Audience:

Managers: Project leaders, directors, vice presidents, marketing manager, product manager, finance managers and managers of any kind involved with data driven decision making

Analysts: Marketing analysts, product analysts, financial analysts and business analysts who want to be more effective in having an impact via data/ analysis

Technology experts: Data analysts, BI directors, developers, DBAs, data warehouses, web analysts, and consultants who wish to extend their expertise to business/ predictive analytics

Background Required: Basics of business, and an interest in leveraging data as an asset.

Workshop Description

Data is your most valuable asset. It represents the entire history of your organization and its interactions with customers. Predictive analytics taps this rich vein of experience in order to delivers a predictive score for each

individual customer, or other organizational element. These customer predictions deliver more relevant content to each customer, improving response rates, click rates, buying behavior, retention and overall profit. Each customer's predictive score informs actions to be taken with that customer – business intelligence just doesn't get more actionable than that.

In this workshop, attendees gain operational familiarity with the power of predictive analytics. Topics covered include:

Predictive analytics methods: Overview of commonly used predictive analytics techniques, mapped to business objective. Learn where each method can be most effectively applied, and how to determine which method will deliver the greatest impact, given the business scenario.

Test-and-Learn analytics: Overview of test design, evaluating results in business terms and bottom lines, incorporating statistical significance and confidence intervals computation.

Use cases: Attendees are guided through business cases from Fortune 500 companies where predictive analytics was applied to solve challenging business problems. The use cases demonstrate how to:

- **Increase ROI** for marketing campaigns with response models
- **Improve product adoption and increase profitability** with next best product models
- **Increase online conversion** with regression models
- **Decrease churn** and enhance customer experience with a net promoter score model
- **Increase the marketable universe** with propensity models
- **Optimize profitability** with customized product offering using micro segmentation
- **Increase customer retention** through churn/attrition models
- **Improve budget and resource planning** using revenue forecasting models
- **Optimize offers and reduce losses** using customer life time value models

Demonstration of Step-by-Step Modeling: With live software examples, attendees are guided through building of Decision Trees and Logistic Regression models using the analytics software Knowledge Seeker, computing incremental \$ Impact from employing the models in a business problem.

Schedule

- Workshop starts at 9:00am
- Morning Coffee Break at 10:30am - 11:00am
- Lunch provided at 12:30 - 1:15pm
- Afternoon Coffee Break at 2:30pm - 3:00pm
- End of the Workshop: 4:30pm

Attendees Receive:

- **Free Templates:** Statistical Significance Worksheet
- A course materials folder
- An official Certificate of Completion (at the conclusion of the workshop)

Monday October 17th, 2011 Full-Day Workshop

9:00am - 4:30pm

R for Predictive Modeling: A Hands-On Introduction



Instructor: Max Kuhn,
Dir. Nonclinical Statistics,
Pfizer

Intended Audience: Practitioners who wish to learn how to execute on predictive analytics by way of the R language; anyone who wants "to turn ideas into software, quickly and faithfully."

Knowledge Level: Either hands-on experience with predictive modeling (without R) or hands-on familiarity with any programming language (other than R) is sufficient background and preparation to participate in this workshop.

The half-day "R Bootcamp" is recommended preparation for this workshop.

Workshop Description

This one-day session provides a hands-on introduction to R, the well-known open-source platform for data analysis. Real examples are employed in order to methodically expose attendees to best practices driving R and its rich set of predictive modeling packages, providing hands-on experience and know-how. R is compared to other data analysis platforms, and common pitfalls in using R are addressed.

The instructor, a leading R developer and the creator of CARET, a core R package that streamlines the process for creating predictive models, will guide attendees on hands-

on execution with R, covering:

- A working knowledge of the R system
- The strengths and limitations of the R language
- Preparing data with R, including splitting, resampling and variable creation
- Developing predictive models with R, including decision trees, support vector machines and ensemble methods
- Visualization: Exploratory Data Analysis (EDA), and tools that persuade
- Evaluating predictive models, including viewing lift curves, variable importance and avoiding overfitting

Hardware: Bring Your Own Laptop

Each workshop participant is required to bring their own laptop running Windows or OS X. The software used during this training program, R, is free and readily available for download.

Attendees receive an electronic copy of the course materials and related R code at the conclusion of the workshop.

Schedule

- Workshop starts at 9:00am
- Morning Coffee Break at 10:30am - 11:00am
- Lunch provided at 12:30 - 1:15pm
- Afternoon Coffee Break at 2:30pm - 3:00pm
- End of the Workshop: 4:30pm

Tuesday, October 18, 2011 Full-Day Workshop

9:00am - 4:30pm

Driving Enterprise Decisions with Business Analytics



Instructor: James Taylor,
CEO,
Decision Management Solutions

Intended Audience:

Managers: Project leaders, directors, CXOs, vice presidents, investors and decision makers of any kind responsible for working with analytics or interested in using analytics to improve their business.

Technical Managers: Analysts, BI directors, developers, DBAs, data warehouse specialists, architects, and consultants who wish to build systems that make better

decisions.

Attendees receive a free copy of the instructor's book, "Smart (Enough) Systems," a course materials book, and an official certificate of completion at the conclusion of the workshop.

Workshop Description

Putting business analytics to work is top of mind for organizations like yours. Business agility and operational responsiveness are more important than ever. There is a real opportunity to use analytics - especially predictive analytics - to seek out increasingly small margins and understand your customers, products, channels, partners and more. But predictive analytics is only part of the solution - you must put these analytic insights to work making better decisions every day. Business rules offer the agile, business-centric platform you need to manage decisions and effectively deploy predictive analytics. Putting them together requires a new conceptual framework - Decision Management.

This workshop covers the principles of Decision Management, its application to critical business processes, and the appropriate use of available technology. We show you how to identify and prioritize the operational decisions that drive your organization's success, introduce business rules as a foundation to automate these decisions, link these decisions to data mining and predictive analytics and discuss how to ensure continuous improvement and competitive advantage using adaptive control.

Delivered as a one day workshop this class covers:

• Challenges in Enterprise Decisions

Business Analytics deliver insight and you need to use that insight to make better decisions. You need your systems and front-line staff to make better decisions while remaining agile and business-centric. Combining analytic accuracy and business ability in this way has many challenges.

• The Solution: Decision Management

Decision Management is the business discipline that enables your organization to get the most from predictive analytics. It builds on existing IT assets and uses business analytics to deliver simpler, smarter, more agile systems and processes.

• Step 1: Decision Discovery

The first step is to identify and categorize the decisions that can be improved with analytics.

- **Step 2: Decision Services**

Next you must develop reusable application components that deliver these decisions to operational systems. By combining business rules technology with data mining and predictive analytics you can develop the components quickly and effectively while ensuring compliance and agility.

- **Step 3: Decision Analysis**

Decisions must be constantly monitored and improved using decision analytics and techniques such as adaptive control, simulation and scenario testing.

- **The Big Picture - Decisions in Processes, Events and Systems**

Decision Services are part of an overall systems portfolio and improve business processes, event processing, and enterprise applications such as CRM, SFA and ERP.

- **Getting Started and First Steps**

While the end game is broad adoption of this new discipline, organizations must adopt it gradually and show an ROI at every stage.

This training is focused squarely on solving business problems and on how the various technologies should be used together. It is vendor-neutral and is for managers - Project leaders, directors, vice presidents and decision makers responsible for working with analytics or interested in using analytics to improve their business - and technology experts - analysts, BI directors, developers, DBAs, data warehouse specialists, architects, and consultants who wish to build smarter systems and processes.

Services are part of an overall systems portfolio and improve business processes, event processing, and enterprise applications such as CRM, SFA and ERP

Schedule

- Workshop starts at 9:00am
- Morning Coffee Break at 10:30am - 11:00am
- Lunch provided at 12:30 - 1:15pm
- Afternoon Coffee Break at 2:30pm - 3:00pm
- End of the Workshop: 4:30pm

Attendees receive:

- A course materials book
- An official certificate of completion (at the conclusion of the workshop)
- A free copy of the instructor's book, "Smart (Enough)

Systems"

- A free copy of the book, "PMML in Action: Unleashing the Power of Open Standards for Data Mining and Predictive Analytics"

Tuesday October 18th, 2011 Full-Day Workshop

9:00am - 4:30pm

Hands-On Business Analytics: Insights to Impact



Piyanka Jain,
Head of NA Business Analytics,
PayPal



Puneet Sharma,
Senior Manager,
PayPal

Intended Audience:

Managers: Project leaders, directors, vice presidents, marketing manager, product manager, finance managers and managers of any kind involved with data driven decision making

Analysts: Marketing analysts, product analysts, financial analysts and business analysts who want to be more effective in having an impact via data/ analysis

Technology experts: Data analysts, BI directors, developers, DBAs, data warehouse specialists, architects, and consultants who wish to extend their expertise to business/ predictive analytics

Background Required: Basics of business, and an interest in leveraging data as an asset.

Workshop Description

Today all leading organizations are rapidly gaining power by leveraging information to gain insights and drive the business. Business analytics delivers actionable insights – new interpretations and evaluations of business performance based on data and statistical methods.

This hands-on workshop takes the business professional on a journey that begins with a business question, proceeds to core analysis, and concludes by deriving insights and making an impact. The agenda covers approaches to communicating analytical findings, delivering powerful presentations, and best practices to build impactful KPI

dashboards. Examples, hands-on exercises, and templates empower attendees to return to their organizations with the processes and toolkit that ensures they are ready to approach any business problem and drive towards impact.

Topics Covered:

1. Business Analysis

- **Business Problem:** How to identify the real business problem behind the data pull
- **Prioritization:** How to prioritize between different asks by quantifying impact
- **Analysis Plan:** Structure analytics using Hypotheses driven approach
- **Derive Insights/ Impact:** How to derive insights from data for portfolio dynamics, campaign analysis, product launch, business case, trend analysis, driver analysis, pre-post, test-control.

2. Communication/Presentation

- Communication/ Influencing with business partner
- Make powerful presentations with strong recommendation and actionable insights
- **Graphical** representation of insights

3. Tools/ Techniques

- Analysis using Excel: Functions, Pivot table, charting, dynamic refresh, formatting

4. Metrics/ Dashboard

- How to build impactful KPI Dashboard/ meaningful metrics

Software/Hardware: Attendees are required to bring their own laptop with Microsoft Excel or equivalent software for hands-on group exercises.

Schedule

- Workshop starts at 9:00am
- Morning Coffee Break at 10:30am - 11:00am
- Lunch provided at 12:30 - 1:15pm
- Afternoon Coffee Break at 2:30pm - 3:00pm
- End of the Workshop: 4:30pm

Attendees Receive:

- A course materials folder
- An official Certificate of Completion (at the conclusion of the workshop)
- **Free Templates:** Analysis Plan, Project Plan, Effective Deck

Tuesday October 18th, 2011 Full-Day Workshop

9:00am - 4:30pm

Hands-On Business Analytics: Insights to Impact



Dean Abbott
President
Abbott Analytics

Intended Audience:

Practitioners: Analysts who would like a tangible introduction to predictive analytics or who would like to experience analytics using a state-of-the-art data mining software tool.

Technical Managers: Project leaders, and managers who are responsible for developing predictive analytics solutions, who want to understand the process.

Knowledge Level: Familiar with the basics of predictive modeling.

Workshop Description

Once you know the basics of predictive analytics, there's no better way to dive in than operating real predictive modeling software yourself - hands-on. "Get your hands dirty" by trying out state-of-the-art modeling methods on real data. Working to solve a specific business problem, you will design and execute on a core analytical approach. Prep the data, set up the modeling, push "go" and check out the results.

"Hands-on Predictive Analytics" puts predictive analytics into action. This one-day workshop leads participants through the industry standard data mining process, from Business Understanding through Model Deployment, approaching each stage of this process by driving a state-of-the-art data mining software product. In this way, attendees gain direct experience applying this "best practices" process, and ramp up on an industry-leading tool to boot.

Key process stages covered during the workshop include:

- **Business Understanding**

Participants will review a problem description from a business perspective, and design one or more solutions to that problem using predictive analytics. The solution will include one or more predictive models as

determined by the participants. These models will be assessed according to the business objective(s) already defined.

- **Data Understanding**

From a given data set (supplied), participants will examine characteristics of the data (a “data audit”) and identify potentially problematic issues. Fields with insufficient information will be discarded.

- **Data Preparation**

Participants will clean fields in the data as necessary, and will derive new attributes as candidate inputs to predictive models.

- **Modeling**

Participants will determine which predictive modeling methods to use, and will build several models and assess them as prescribed in the Business Understanding phase. The best model from the competing candidates will be selected to evaluate and deploy.

- **Evaluation**

A final evaluation of the model(s) will be made, and the expected financial benefit of the model(s) will be forecast and graphed. As time permits, an “ensemble” model composed of all the models built by participants will be created to compare with the best individual models - we’ll often find that the big “uber-model” is the best model of all.

- **Deployment**

Strategies for real-world model deployment will be assessed, including the application of the predictive model for its intended purpose - to produce scores that predict “tomorrow” across today’s customer data.

Participant background

Participants are expected to know the principles of predictive analytics. This hands-on workshop requires all participants to be involved actively in the model building process, and therefore must be prepared to work independently or in a small team throughout the day. The instructor will help participants understand the application of predictive analytics principles, and will help participants overcome software issues throughout the day.

Software

While the vast majority of concepts covered during this workshop apply to all predictive analytics projects - regardless of the particular software employed - this workshop’s hands-on experience is achieved via SAS Enterprise Miner. A license will be made available to

participants for use on that day (included with workshop registration).

Hardware: Training Computers Are Included

Each workshop participant will have access to a computer with SAS Enterprise Miner installed for the duration of the workshop.

Attendees receive a course materials book and an official certificate of completion at the conclusion of the workshop.

Schedule

- Workshop starts at 9:00am
- Morning Coffee Break at 10:30am - 11:00am
- Lunch provided at 12:30 - 1:15pm
- Afternoon Coffee Break at 2:30pm - 3:00pm
- End of the Workshop: 4:30pm

● Track 1: all levels ▲ Track 2: expert/practitioner \$ Track 3: Financial Services Applications

Wednesday, October 19, 2011

Exhibit Hall Open 10:00am - 7:30pm

7:30-9:00am

Registration & Breakfast

9:00-9:45am

Keynote: Persuasion by the Numbers: Optimize Marketing Influence by Predicting It
 Speaker: Eric Siegel, Ph.D., Program Chair, Predictive Analytics World

Data driven marketing decisions are meant to maximize impact – right? Well, the only way to optimize marketing influence is to first predict it. The analytical method to do this is called uplift modeling. This is a completely different animal from what most models predict: customer behavior. Instead, uplift models predict the influence on customer behavior gained by choosing one marketing action over another. The good news is case studies show ROI going where it has never gone before. The bad news? You need a control set... But you should have been using one anyway! The crazy part is that “marketing influence” can never be observed for any one customer, since it literally involves the inner workings of the customer’s central nervous system. If influence can’t be observed, how can we possibly model and predict it?

9:45am-10:05am

Diamond Sponsor Presentation

10:05am-10:15am

Platinum Sponsor Presentation

10:15am-10:45am

Break / Exhibits

10:45am-11:05am

● Track 1: Insurance Applications

Case Study: Infinity Insurance Next Generation Claims Systems

Speaker: James Taylor, CEO, Decision Management Solutions

Today’s insurance claims systems deliver value by increasing efficiency through process automation and workflow. The use of manual decision points within these processes and systems, however, creates bottlenecks and under-utilizes company expertise. Insight gained from data mining and

analytics is restricted to the back office and IT resources cannot be freed up from legacy systems maintenance. This session will show how a number of insurers are using predictive analytics embedded in rules-based decision services to build a new generation of more effective claims systems.

10:45am-11:30am

▲ Track 2: Survey Analysis

Case Study: YMCA Turning Member Satisfaction Surveys into an Actionable Narrative

Speaker: Dean Abbott, President, Abbott Analytics & Bill Lazarus, President & CEO, Seer Analytics, LLC

Survey analysis often involves hand-tuned analysis requiring weeks of labor to decipher the key relationships in survey responses. Proper coding of responses, colinearity, and missing data plague analysts in their pursuit of clear explanations of responder intent in the surveys. Additionally, while traditional statistical analyses, such as factor analysis, linear and logistic regression, can be used effectively in modeling survey responses, these models do not resonate with the business community in the same way they do with statisticians. The approach followed in this case study provides a narrative history of how classical statistical and data mining techniques were employed in the analysis of a large survey dataset and how the analytic strategy evolved over time. To address end user needs and display results in a manner that is intuitive to decision-makers the structure of the “Member Experience” was re-conceptualized into a six dimension hierarchy. A validation of the re-conceptualizes theoretical structure along with live demos of actual data will be shown to illustrate summaries of the surveys, reveal strengths and weaknesses of branches, and suggest how branches can improve the member experience.

10:45am-11:30am

\$ ● Track 3: e-Commerce; Thought Leadership

Case Study: PayPal/eBay Putting Predictive Analytics into Context: The Analytics Value Chain

Speakers: Piyanka Jain, Senior Manager, PayPal & Puneet Sharma, Senior Manager, PayPal

In a product/services company, analytics generates its greatest value when a certain line-up of best practices is performed, ranging from gross intelligence to a more detailed understanding. This is achieved with a “three pillar” analytical approach: [Measurement Framework,

● Track 1: all levels. ▲ Track 2: expert/practitioner 💰 Track 3: Financial Services Applications

Portfolio Analysis, and Customer Analysis]. Within each of these components, we move from a simpler “20,000 foot” view analysis, to deeper, more comprehensive analytics.

In this case study, these components in detail, along with the tools and techniques required and gotchas to look out for will be covered. Auxiliary intelligence such as VOC (Voice of the Customer) and Competitor / Industry / Economic landscape analysis, which delivers an [outside-in] view of the business, will also be covered.

What you will walk away with is:

- An understanding of the [analytics value chain], which sets predictive analytics into an impactful context
- Analytics your organization needs to better understand your business
- Tools and methodologies best suited for the [three pillars] of analysis
- Challenges to prepare for, as you embark on these analyses
- Organizational support needed for analytics execution.

11:10-11:30am

Gold Sponsored Presentation

11:35am-12:00am

Multiple Case Studies: Anheuser-Busch, the SSA, Netflix Data Mining Lessons Learned – Technical & Business - from Applied Projects

Speaker: John F. Elder IV, Ph.D., Chief Scientist, Elder Research, Inc.

In the recounting of analytics projects, my favorite part is “the reveal”: where the idea that turned things around is disclosed. Often disarmingly simple (in retrospect) it is virtually always preceded by waves of failure. Yet failure, or at least an environment shockingly tolerant of it, may be essential to the emergence of such breakthroughs.

I will tell tales of some favorite “reveals” that led to technical successes. But, a true win must also be a business success. This requires dealing well with idiosyncratic carbon-based life forms. So we’ll also discuss the (painfully acquired) lessons in the parallel universe of business.

12:20pm-12:35pm

Lightning Round of 2-minute Vendor Presentations

12:35pm-1:35pm

Birds of a Feather Lunch / Exhibits

1:35pm-1:55pm

● Track 1: Thought Leadership

Case Study: LinkedIn Data Science at LinkedIn: Iterative, Big Data Analytics and You

Speaker: Manu Sharma, Principal Research Scientist, LinkedIn

Companies who compete on analytics and delivering data-driven services need to iterate quickly on big data. This enables rapid data exploration to identify unknown relationships and trends to create new products and services. Come to this session to see how LinkedIn has created a core competency around analytics. Understand about the techniques and technologies LinkedIn data scientists use to create data-driven products. Get ideas of how to apply iterative big data analytics in your own organization and enable your own analytics center of innovation.

1:35pm-1:55pm

▲ Track 2: Demand Forecasting

Case Study: Cox Communications What Happens Next? Automated Smart Demand Forecasting

Speaker: Bob Wood, Director of Marketing Science, Cox Communications

At Cox Communications, forecasting future demand by product line has become an essential business function to direct and regulate operational, marketing, and sales resources. This case study will focus on a forecasting process transformation and its resulting learnings that recently occurred in Cox’s Central Region. In the past, forecasting results were generated by ARIMA and exponential smoothing techniques, modified by analysts, and delivered via an Excel report on a public drive. This report, known locally as the ‘Daily Prophet’, was recently transformed to a fully automated system producing predictions through neural networks processing lagged data, captured economic variables, and operational metrics. Additionally, errors are now captured and monitored using a re-purposed statistical process that provides notifications of inaccuracy or consistency. The transition to automation using a broader set of inputs, and the ability to monitor results, has not only brought increased efficiency to the business, but maintained trust in the transformation as well.

● Track 1: all levels. ▲ Track 2: expert/practitioner \$ Track 3: Financial Services Applications

1:35pm-1:55pm

\$ ▲ Track 3: Risk Management

Case Study: ACE Cash Express Credit Risk Analytics Framework for Subprime Loans

Speaker: Senthil Ramanath,
Head of Analytics, ACE Cash Express

Analytics is all about strategy and framework, rarely is it about tools or techniques. In this case study, I will be diving into the structural requirements of subprime credit risk analytics. We will be discussing a framework that cuts across the spectrum of corporate needs from loan origination to loss mitigation.

Top 3 takeaways:

1. Unified framework to analyze subprime consumer loans,
2. Evaluating when a strategic change is necessary,
3. Methodically instituting the fine balance between limiting the risk and growing the top-line.

Subprime lending presents unique twists to these problems. In this session, I will be focusing on the best way to frame these problems.

2:00pm-2:20pm

▲ Track 2: Forecasting (Per-Product); Retail

Case Study: A Top Global Retailer Broad Scale Predictive Modeling Optimization in Marketing and Retail Sales

Speaker: Felipe Fernandez, CEO & Partner, Interefe (Brazil)

This case study will show how we created an automated, high-speed prediction/optimization system by leveraging data mining. Our system predicts retail sales on a product-by-product basis throughout a network of retail stores and is used for planning, logistics, and optimization with respect to pricing, promotion and assortment. There were many challenges, as we work with more than 100,000 products, operate networks of hundreds of brick and mortar stores and predictions must be updated frequently. Additionally there were constraints related to product promotion and contracts with suppliers that limited our flexibility. We overcame our challenges and achieved new levels of accuracy and reliability.

2:00pm-2:20pm

\$ ▲ Track 3: Direct Marketing New Products

Case Study: A Top 5 International Bank Product Testing in Financial Services: Financial Analytics

Speaker: Dinabandhu Bag, Associate Professor, National Institute of Technology, India

Credit Marketing has come a long way in today's economy of hard-hitting competition and diminishing customer loyalty. With the increasing level of cut-throat competition, decreasing customer loyalty and the increasing commoditization of banking products, it has become essential in today's sluggish economy for banks to proactively understand the changing customer preference. Understanding the changing customer preference can help build a value proposition for the Bank since banks today are flexible enough to align their products towards the value needs of their customers. For example, the rapid launch of a new product within the customer base of savings account or credit cards would also require testing to understand the value of both the Bank and its customer accurately. Traditional testing by the direct marketers has involved split groups, like an apple to apple, to compare customers' reaction to different offers. As the levels of an attribute increases, the bank needs a much larger number of test groups to establish its customers' value preferences due to the change in rates. Therefore, with changing times, the traditional process of testing has become cumbersome. This also turns out to be a gigantic task for the bank and there should exist a scientific method to reduce the test size while gaining the same amount of information. We propose an objective method of testing offers using an experimental design approach. We provide significant insights to the design of Banks' offers. We conclude that incremental lifts in response rates are much higher against lower interest rates for home loans and lower late fees for credit cards.

2:35pm-3:10pm

Keynote

Jeopardy-Winning Watson and DeepQA

Speaker: David A. Ferrucci, IBM Fellow & Watson Principal Investigator, IBM Research

Computer systems that can directly and accurately answer peoples' questions over a broad domain of human knowledge have been envisioned by scientists and writers since the advent of computers themselves. Open domain question answering holds tremendous promise for facilitating informed decision making over vast volumes

● **Track 1: all levels.** ▲ **Track 2: expert/practitioner** \$ **Track 3: Financial Services Applications**

of natural language content. Applications in business intelligence, health care, customer support, enterprise knowledge management, social computing, science and government could all benefit from computer systems capable of deeper language understanding. The DeepQA project is aimed at exploring how advancing and integrating Natural Language Processing (NLP), Information Retrieval (IR), Machine Learning (ML), Knowledge Representation and Reasoning (KR&R) and massively parallel computation can greatly advance the science and application of automatic Question Answering. An exciting proof-point in this challenge was developing a computer system that could successfully compete against top human players at the Jeopardy! quiz show (www.jeopardy.com).

Attaining champion-level performance at Jeopardy! requires a computer to rapidly and accurately answer rich open-domain questions, and to predict its own performance on any given question. The system must deliver high degrees of precision and confidence over a very broad range of knowledge and natural language content with a 3-second response time. To do this, the DeepQA team advanced a broad array of NLP techniques to find, generate, evidence and analyze many competing hypotheses over large volumes of natural language content to build Watson (www.ibmwatson.com). An important contributor to Watson's success is its ability to automatically learn and combine accurate confidences across a wide array of algorithms and over different dimensions of evidence. Watson produced accurate confidences to know when to "buzz in" against its competitors and how much to bet. High precision and accurate confidence computations are critical for real business settings where helping users focus on the right content sooner and with greater confidence can make all the difference. The need for speed and high precision demands a massively parallel computing platform capable of generating, evaluating and combing 1000's of hypotheses and their associated evidence. In this talk, Dr. Ferrucci will introduce the audience to the Jeopardy! Challenge, explain how Watson was built on DeepQA to ultimately defeat the two most celebrated human Jeopardy Champions of all time and will discuss applications of the Watson technology beyond in areas such as health care.

3:10pm-3:30pm

Diamond Sponsor Presentation

3:30pm-3:40pm

Platinum Sponsor Presentation

3:40pm-4:15pm

Break / Exhibits

4:15pm-5:00pm

● **Track 1: Crowdsourcing Data Mining; Healthcare**

Case Study: Kaggle

Predictive Modeling Competitions and the Heritage Health Prize

Speaker: Anthony Goldbloom, Chief Executive Officer, Kaggle

The biggest news in predictive analytics in 2011 is the launch of the \$3 million predictive modeling prize by the Health Provider Network (HPN). This is the biggest data mining competition ever and hopes to show the world the power of predictive modeling when applied to healthcare. In an age of big and complex data, competitions appear to be the best way to get the most out of a predictive modeling problem. Whereas a single data scientist can do so well on a problem, a competition brings in fresh eyes and new ideas, which allows companies and researchers to reach the limit of what's possible. Kaggle has hosted competitions that have improved the state of the art in HIV research, chess ratings and motorway travel time forecasting. This session will cover the Heritage Health Prize as well as some other competition case studies.

4:15pm-5:00pm

Lab Session: Live Topical Demo

4:15pm-5:00pm

\$ ● **Track 3: Uplift Model**

True-Lift Modeling: Mining for the Most Truly Responsive Customers & Prospects

Speaker: Jane Zheng, Principal Decision Scientist, Fidelity Investments

Stop spending direct marketing dollars on customers who would purchase anyway!

True-lift modeling can identify:

- which customers will purchase without receiving a marketing contact
- which customers need a direct marketing nudge to make a purchase
- which customers have a negative reaction to marketing (and purchase less if contacted)

This discussion will describe:

- the basic requirements needed to succeed with true-lift modeling

● **Track 1: all levels.** ▲ **Track 2: expert/practitioner** \$ **Track 3: Financial Services Applications**

- scenarios where this modeling method is most applicable
- the pros and cons of various approaches to true-lift modeling

5:00pm-5:25pm

Break / Exhibits

5:25pm-5:45pm

● **Track 1: Healthcare**

Case Study: Blue Cross & New Directions Behavioral Health

They Keep Coming Back - Predicting Hospital Readmissions

Speaker: Fred Grunwald, Vice President of Analytics, New Directions Behavioral Health

Hospital readmissions are a significant factor in the nation's spiraling health care costs. Experts estimate that up to 75% of hospital readmissions are preventable. This case study focuses on behavioral health readmissions and addresses the task of predicting the patients most at risk. High risk cases are then assigned in a cost effective manner to skilled clinical teams.

5:25pm-5:45pm

▲ **Track 2: Market Mix Modeling**

Case Study:

Methods for Market Mix Modeling Explained

Speaker: Donald Cozine, Director of Statistical Analysis, ANALYTICI

Marketing Mix Models (aka Marketing Effectiveness, Marketing ROI Models) are relied on to measure and optimize an organization's marketing spend. The quality of these models is extremely important for measuring the ROI, especially for companies spending millions or hundreds of millions of dollars on media. These models are rooted in time series Econometrics and VARMAX models can be leveraged to produce a variety of commonly used models: ARIMAX, Autoregression Models, Vector Autoregressions (VAR), Vector Error Correction (VEC) Models along with Granger Causality, Unit Root and Cointegration Tests – some Chow tests, etc. Traditional approaches produce the requisite graphics (impulse response functions, etc.), but have lacked the ability to easily simulate outcomes. Marketers and Senior Management typically request various model-based scenarios (e.g., how much television spending for a given amount of radio and digital spend?). This case study will endeavor to more easily link simulations, visualization, and econometric methods using

simulated data.

5:25pm-5:45pm

\$ ● **Track 3: Survey Analysis & Churn Risk Detection**

Case Study: PayPal

Identifying Customers Who Expressed Intend-to-Churn or Defect from Large Number of Surveyed Verbatim

Speaker: Han Sheong Lai, Director of Operational Excellence & VOC, PayPal

How can customers' intend-to-churn or defect be detected without having to read the large number of customer verbatim feedback? In this case study, we'll show you how we use a combination of human-classified verbatim (into at-risk and not-at-risk) and query-based text search to classify a set of 'at-risk' verbatim set. We then use it as a training set for a supervised learning algorithm to predict and classify a large set of customer verbatim into at-risk and non-at-risk so that actions can be taken to prevent churn and learn from their feedback.

5:50pm-6:10pm

Gold Sponsored Presentation

5:50pm-6:10pm

▲ **Track 2: Market Mix Modeling**

Case Study: Overstock.com

The ReLab \$1 Million Prize on Overstock.com: Driving Innovation with Live Data in the Cloud

Speaker: Darren Erik Vengroff, Chief Scientist & Vice President of Product, RichRelevance

The ReLab Prize on Overstock.com is a program like the Netflix prize and the Heritage Health Prize, designed to spur innovation in retail personalization by a large community of motivated researchers. We go beyond offline data sets, however, and allow semifinalists and finalists to run their algorithms against live traffic on Overstock.com. This allows us to choose winners not solely based on mathematical notions of algorithmic quality, but on how real shoppers interact with them. The challenge with any contest using real data, whether historical data sets of live traffic, is that personal information about real shoppers must not be released. We solve this problem with a new approach that brings researchers' algorithms into our secure cloud to run against large sets of live shopping data, rather than exporting anonymized data to the world at large.

Online product recommendations are among the shopping

● Track 1: all levels ▲ Track 2: expert/practitioner \$ Track 3: Financial Services Applications

tools most widely used by consumers who need to easily find relevant and enticing products from the millions available online. Overstock.com has worked with this Prize's facilitating vendor since 2009 to present shoppers with dynamic recommendations that grow smarter over time and accurately reflect more than 60 different ways that people shop on the site (by price, by brand, by category). The ReClab Prize on Overstock.com is intended to spur a new generation of research in this area using real data sets at massive scale.

5:50pm-6:10pm

\$ ● Track 3: *Financial Indicators from Social Media*

Case Study:

Social Media Analysis for Market Prediction: Collective Mood States and the Wisdom Crowds

Speaker: Johan Bollen, School of Informatics and Computing, Center for Complex Networks and System Research, Indiana University

6:10pm-7:30pm

Reception / Exhibits

7:30pm-10:00pm

NYC Predictive Analytics user Group Meeting

NYC Predictive Analytics is a non-profit professional group that meets monthly to discuss diverse topics in predictive analytics and applied machine learning. We are a group 1000+ members strong comprised of analysts, computer scientists, engineers, executives, entrepreneurs and students with a deep interest in these fields & related technologies.

Thursday, October 20, 2011

10:00am-4:30pm

Exhibit Hall Open

8:00am-9:00am

Registration & Breakfast

9:00am-9:45am

Expert Panel: Wise Enterprise

Best Practices for Managing Predictive Analytics

Your company is trigger-happy for predictive analytics, and there's plenty of excitement, momentum and public case

studies fueling the flames. Are you destined for success or disappointment? Is it a sure-fire win to gain buy-in for a promising analytics initiative, equip your most talented practitioners with a leading solution, and pull the trigger?

This panel of leading experts will address the holistic view. What are the most poignant and telling failures in the repertoire, and where is the remedy? Beyond the management of individual analytics projects, what enterprise-wide communication processes and other best processes provide best security against project pitfalls? Stay tuned for big answers to these big questions.

9:45am-9:55am

Platinum Sponsor Presentation

9:55am-10:15am

Lightning Round of 2-minute Vendor Presentations

10:15am-10:25am

Industry Trends: 2011 Data Miner Survey Results: Highlights

Speaker: Karl Rexer, Ph.D., President, Rexer Analytics

Do you want to know the views, actions, and opinions of the data mining community? Each year, Rexer Analytics conducts a global survey of data miners to find out. This year at PAW we unveil the results of our 5th Annual Data Miner Survey.

This session will present the research highlights, such as:

- Demand for data mining
- Open-source data mining software: usage trends
- Data visualization
- Text mining trends
- Measurement of analytic project performance/success

The full Summary Report will then be immediately available online to all PAW attendees.

10:25am-10:55am

Break / Exhibits

10:55am-11:15am

● Track 1: *Thought Leadership*

Case Study: Microsoft

Mattering More at Microsoft: Converting Insights into Better Business Results

● Track 1: all levels. ▲ Track 2: expert/practitioner \$ Track 3: Financial Services Applications

Speaker: Joseph LaCugna, Senior Director, Microsoft

Microsoft employs thousands of analysts who compete for executives' time and attention in a vibrant marketplace of ideas. Some analysts' work moves mountains and directly improves business results; many more analysts' work matters very little. Rarely is the difference in impact due to superior analytic insights or larger data sets. What explains these differences in impact, and how can analytic teams matter more?

This session exposes the most frequent barriers analysts encounter and evaluates different influence strategies that have proven effective at increasing analysts' impacts and contributions. Microsoft is used as a case study to assess how analytic teams' insights can become more relevant and have even bigger impacts on key business priorities.

10:55am-11:15am

▲ *Track 2: Fraud Detection*

**Case Study: U.S. Postal Service Office of Inspection General
Fighting the Good Fraud Fight**

Fraud is a costly problem for many businesses, and the efforts required to protect against it further compound the price. We will discuss the cultural and business hazards of addressing versus ignoring fraud, as well as the enormous ROI possible when adaptable quantitative tools are used to detect ever-changing anomalous behavior. Case studies from some of our consulting engagements will highlight lessons learned about what makes a potential fraud detection project ripe for success.

Speaker: Antonia de Medinaceli, Senior Business Analyst, Elder Research, Inc.

10:55am-11:15am

\$ ● *Track 3: Mobile Analytics*

**Case Study: Citibank
Predictive Analytics in
Customer Digital Payments**

Speaker: Ramendra Sahoo, Senior Vice President of Analytics, Citibank

Digital universe information is expected to grow from current level of 1.2 zettabytes to a whopping 35 zettabytes by 2020. Absence of digital financial ecosystem within banking and financial services makes customers to avail several nascent retail services outside the main stream banking. It is estimated the global remote payment to increase nearly threefold within next five years.

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Recent regulatory changes have led the customers to not only seek for simplified solutions, but also clarity of information about what the business can or cannot do for the customer. Consumers are becoming more and more innovative online through crowd-sourcing while using friends and families and their digital contact to get decisions in real-time. While large-scale banks used to garner information, small start-ups utilize crowd-sourcing to not only operate with innovative and nice anecdote business models while analytics is done by means of processing information using online resources.

This session will highlight and discuss the upcoming collaborative business models to use analytics, online and digital media with "platform as a service".

11:20am-11:40am

● *Track 1: Mobile Analytics & Search*

**Case Study: Microsoft
Mobile Search Advertising & the Importance
of Data in Understanding Customer Intent**

Speaker: Will Dannenberg, adCenter R&D Group Program Manager, Microsoft & Dhiraj Rajaram, Mu Sigma

This session covers what the mobile paid search marketplace has to offer marketers and understand how analytics helps search engines understand their customers.

You will learn:

- Why you should be leveraging the mobile search advertising space to reach out to potential customers.
- Opportunity to understand the intentions of users in mobile search and how it is different than historical PC search.
- Discover technologies and processes that enable In-Database Analytics to help clients achieve their goals.

11:20am-11:40am

Lab Session: Live Topical Demo

11:20am-11:40am

\$ ● *Track 3: Fraud Detection*

**Case Study: 3 Major US Banks
Developing Business Cases for Banking Fraud
Detection**

Speaker: Kurt Gutzmann, Marketing Director & Principal Analyst, Gutzmann Consulting Group LLC

This is a method for determining the business cases for deploying predictive analytics for retail banking fraud

● Track 1: all levels. ▲ Track 2: expert/practitioner \$ Track 3: Financial Services Applications

detection. This includes credit and debit cards, deposit accounts, online and mobile banking, and other banking matrices for a notional detector form the basis of the method for computing an NPV and identifying the optimal score thresholds for fraud detection. Actual case studies are included in this session.

11:45am-12:30pm

Special Plenary Session

The Future of Targeting and On-Line Marketing – Predictive Analytics on Big Data

Speaker: Usama Fayyad, Chairman & CTO of ChoozOn Corporation

This session will show:

- The growth in search marketing eclipsed traditional brand advertising, for a while. However, there is a comeback that depends heavily on predictive analytics and targeting.
- The future is evolving in the kinds of marketing, how marketers think of targeting, and the importance of context and consumer intent.
- Inferring user intent from behavior, context, and apps that elicit explicit statement of intent is the way to the future or relevant advertising.
- The brave new world of on-line marketing and how it is beginning to break the mold of traditional advertising and marketing.
- For the first time, we are beginning to see new generation marketing approaches that truly leverage the interactive medium that represents on-line and mobile apps.
- What are the new trends? What are these new generation marketing approaches? And what is the role of predictive analytics in this new world?

12:30pm-1:30pm

Birds of a Feather Lunch / Exhibits

1:30pm-2:15pm

Keynote: Every Day Analytics: Making Leading Edge Commonplace

Speaker: Thomas Davenport, President's Distinguished Professor, Babson College, Author, *Competing on Analytics: The New Science of Winning*

As hype increases about the value and quantities of data, the world is beginning to understand the potential of analytics. One doesn't need to be a statistician to get excited – these conversations are no longer just about algorithms. Consumers are directly impacted in their daily lives, as even their running shoes can give them analytical feedback on their workout. In this session, Thomas H. Davenport of the International Institute for Analytics will discuss every day innovations in analytics and how, as we learn to harness insight from data, our world may change.

2:15pm-3:00pm

Break / Exhibits

3:00pm-3:45pm

Lab Session: Live Topical Demo

Speaker: TBA

3:00pm-3:20pm

▲ Track 2: Law Enforcement

Case Study: CMPD

Law Enforcement Analytics Solution Helps Identify Potential Criminal Activity

Speaker: Robert Broughton, Crime Analyst, Charlotte-Mecklenburg Police Department

In this session, Robert Broughton, Crime Analyst at Charlotte-Mecklenburg Police Department (CMPD), will discuss how his department used business intelligence to analyze past crime trends and patterns; better determine how resources should be deployed to reduce crime; predict the likelihood of particular crimes based on geography and other factors; and monitor crime activity in real time. CMPD built its Law Enforcement Analytics (LEA) solution to track these and other factors and foster a more effective police force. Robert will highlight the benefits of predictive modeling and provide additional examples of how this solution has benefitted CMPD.

3:00pm-3:45pm

\$ ● Track 3: Retention with Churn Modeling

Speaker: GE Capital

Using Segmentation & Predictive Analytics to Reduce Customer Attrition

Speaker: David Liebskind, Retail Analytics Leader, GE Capital

Attendees will learn more about the following:

1. Understanding the different types of attrition and how to measure it through business intelligence.

2. What is the financial impact of attrition and how does it affect your business.
3. How to develop a Retention Framework using analytical tools such as segmentation and modeling to help combat attrition.
4. Key topics that will be covered are how to leverage analytical tools and business insights to develop proactive marketing and contact management strategies that will increase ROI and optimize marketing investment.
5. Learn more about how to successfully implement segmentation and predictive models through case studies and recommended best practices.

This session will appeal to a wide audience including marketing managers, analytics, finance and senior management across a variety of different verticals.

3:25pm-3:45pm

▲ *Track 2: Law: Forecasting for a Legal Defense*

Case Study: A Significant Legal Case Major Litigation Strongly Supported by Fuzzy Reasoning

Speaker: DL vonKleleck, Founder vK Systems, Inc.

A major regional utility had contracted with the world's #1 software services provider for the development, delivery, and installation new enterprise billing and tracking system. Failure to deliver resulted in litigation. Utility needed expert witness to develop case study materials. I was contracted to do so and used industry standard stats to develop a fuzzy logic simulation model that confirmed the probability of meeting contracted delivery schedule was less than 0.001.

3:45pm-4:30pm

Break / Exhibits

4:30pm-4:50pm

● *Track 1: Retention with Churn Modeling*

Case Study: PayChex, Inc. Combat Client Churn with Predictive Analytics

Speaker: Frank Fiorille, Director of Enterprise Risk Management, Paychex, Inc.

In economic conditions such as this, it is critical for businesses to have a stronghold on their client retention efforts. Historically, it has been shown that businesses that excel in this arena are often better positioned for long-term success and possess a competitive advantage. To optimize the value of retained customers it's essential to

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understand which clients are a fit for retention campaigns so that the loss of time and resources is minimized. In this session, we will review how Paychex leveraged two existing models, Paychex Attrition Model and a custom built Lifetime Value Model, to create a Retention Tracking System (RTS). Since being deployed across the entire branch network, the Retention Tracking System has become an invaluable resource as offices nation-wide strive to meet, and exceed, their retention goals.

4:30pm-4:50pm

▲ *Track 2: Social Data*

Case Study: Match.com Search and Social: Intelligent Matching at Match.com

Speaker: Amarnath Thombre, Vice President of Strategy & Analytics, Match.com

What we commonly think of as search is generally one-way: when you search for a book on Amazon or a restaurant on Google, the engine needs to find something the searcher likes. On Match.com, the searcher, and the person who is found through the search, need to both like each other in order to have success: this creates the need for highly sophisticated search processes. In this session Amarnath will discuss how Match.com is considered one of the most popular consumer uses of predictive analytics. How the more a user is on the site, the better the matching will be. It's incorporation of static information, user behavior, and community behavior is, we believe, unparalleled in the industry.

4:30pm-5:15pm

● *Track 3: Black Box Trading*

Case Study: Rebellion Research Humans, Rules & Machine Learning: Three Prediction Paradigms

Speaker: Spencer Greenberg, Chief Executive Officer & Chief Software Architect, Rebellion Research

In this session, I will discuss three common ways to make predictions: relying on the human brain directly, designing software that implements rules developed by human experts, and utilizing machine learning based prediction methods. I will analyze the advantages and disadvantages of each of these three approaches, using the stock market as a case study of an area where all three methods are actively applied, but where prediction is especially challenging.

4:55pm-5:15pm

● *Track 1: Supply Chain Management*

Case Study: United Group Holdings

Value Proposition Segmentation (VPS) Method

Speaker: Amjad Zaim, Ph.D., CEO & Co-Founder, Cognitro Analytics

Customers, in today's competitive market, effective management of customer relations lies in the ability to optimize the dual creation of firm (shareholder) and customer value. Accordingly, the challenge for many companies is to be able to understand and differentiate heterogeneous customers by their needs to deliver the winning value proposition profitably. This session will show how our proposed VPS model addresses the basic managerial concern of balancing relationships from both the seller's (customer loyalty) and the buyer's (customer benefit), by considering both the service provider's financial performance (i.e. customer value to the firm) and the value customers receive from the provider's offerings (i.e. customer benefit).

4:55pm-5:15pm

▲ *Track 2: Social Data: Advanced Methods*

Network Maps for End Users: Collect, Analyze, Visualize and Communicate Network Insights with Zero Coding

Speaker: Marc A. Smith, Chief Social Scientist, Connected Action Consulting Group

Networks are everywhere except the end user desktop. NodeXL, the free and open network overview, discovery and exploration add-in for the popular and familiar Excel (2007/2010) spreadsheet allows users who are comfortable making pie charts to now make useful network visualizations. Developed and released by the Social Media Research Foundation, NodeXL uses Excel as a framework, providing a GUI network browser (a "web browser"?) that novices can use quickly and experts can use to generate sophisticated results. Data importers provide access to a range of social media network data sources like Twitter, flickr, YouTube, Facebook, email, the WWW, and more through standard file formats (CSV, GraphML, Matrix). Simple-to-use tools can automatically analyze, visualize and highlight insights in complex network graphs. Using NodeXL, researchers have been collecting a wide range of network data sets from various social media services. These images reveal a range of common social formations in social media and point to people who occupy strategic locations in these graphs.

Friday, October 21, 2011

Full-day Workshop

The Best and the Worst of Predictive Analytics: Predictive Modeling Methods and Common Data Mining Mistakes



Instructor: John Elder, Ph.D.,
Chief Scientist,
Elder Research, Inc.

Predictive analytics has proven capable of enormous returns across industries – but, with so many core methods for predictive modeling, there are some tough questions that need answering:

- How do you pick the right one to deliver the greatest impact for your business, as applied over your data?
- What are the best practices along the way?
- And how do you avoid the most treacherous pitfalls?

This one-day session surveys standard and advanced methods for predictive modeling. Dr. Elder will describe the key inner workings of leading algorithms, demonstrate their performance with business case studies, compare their merits, and show you how to pick the method and tool best suited to each predictive analytics project. Methods covered include classical regression, decision trees, neural networks, ensemble methods, uplift modeling and more.

The key to successfully leveraging these methods is to avoid “worst practices”. It’s all too easy to go too far in one’s analysis and “torture the data until it confesses” or otherwise doom predictive models to fail where they really matter: on new situations.

Dr. Elder will share his (often humorous) stories from real-world applications, highlighting the Top 10 common, but deadly, mistakes. Come learn how to avoid these pitfalls by laughing (or gasping) at stories of barely averted disaster.

If you’d like to become a practitioner of predictive analytics – or if you already are, and would like to hone your knowledge across methods and best practices, this workshop is for you!

What you will learn:

- The tremendous value of learning from data

- How to create valuable predictive models for your business
- Best Practices by seeing their flip side: Worst Practices

- Workshop starts at 9:00am
- First AM Break from 10:00 - 10:15
- Second AM Break from 11:15 - 11:30
- Lunch from 12:30 - 1:15pm
- First PM Break: 2:00 - 2:15
- Second PM Break: 3:15 - 3:30
- Workshops ends at 4:30

Instructor: John F. Elder IV, Ph.D.,
Chief Scientist, Elder Research, Inc.

Full-day Workshop

Deploying User-Friendly Predictive Analytics: Delivering Results to Business Users with Interactive Applications



Instructor: Jeff Mergler,
Lead Statistical Applications Trainer,
TIBCO Spotfire

Businesses that win in volatile environments rely more on insight than intuition. To this end, business users must rely on predictive analytics applications to make better, more data-driven decisions.

Too often, however, valuable analytical results -- such as those derived with R, the leading open-source analytical platform -- are not communicated successfully to business users, who require clarity and support as non-experts. Analytical experts generally do not have the resources or tools to deliver their data-driven capabilities in an interactive, user-friendly form so that their customers may ask and answer questions on their own.

The challenge of communicating analytical results is often a primary roadblock in broadening the deployment of predictive analytics at any organization. These organizations often fail to extract value from their IT-centric data collection efforts, as their projects become mired by the overhead of defining requirements, hiring engineering and data mining experts, and developing targeted business applications. Typically, business conditions have changed by the time systems are in place.

In this hands-on workshop, you will gain experience

building user-friendly predictive applications that quickly operationalize analytical models developed in R, serving these capabilities to end business users. Example applications covered include:

- Predicting Cross-Sell opportunities with classification trees
- Revenue and Price Forecasting with time series.

Workshop participants will employ a leading software solution designed for the agile development of interactive, predictive analytics applications: Spotfire. You will learn how to rapidly prototype and operationalize predictive applications using this platform's highly interactive visualizations, while still fully leveraging the breadth of analytics available through the R language. Suitable for sharing with a wider audience of non-programming business analysts, these analytic applications allow decision makers to do their own "what-if" scenario analyses, while allowing practitioners to ensure statistical rigor by controlling the extent to which model parameters are exposed.

- Workshop starts at 9:00am
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Thomas Davenport, President's Distinguished Professor, Babson College; Author, *Competing on Analytics*; Co-Founder, International Institute for Analytics

Thomas Davenport is currently the President's Distinguished Professor of Information Technology and Management at Babson College. He is the former director of research centers at SAS, Ernst & Young, and McKinsey, and has taught at Harvard Business School, Dartmouth's Tuck School of Business, and the University of Texas at Austin.

Thomas is a frequent contributor to Harvard Business Review and other leading journals. His recent article, "Competing on Analytics," was Harvard Business Review's most requested article reprint of 2006. He is the author or co-author of twelve books, including the bestsellers *Working Knowledge: How Organizations Manage What They Know* and *Process Innovation: Reengineering Work through Information Technology*. His latest book, *Competing on Analytics: The New Science of Winning*, has become a best-seller and is being translated into 10 languages.

Keynote: Every Day Analytics: Making Leading Edge Commonplace



**David A. Ferrucci
IBM Fellow & Watson Principal Investigator, IBM Research**

Dr. David Ferrucci is an IBM Fellow and the Principal Investigator (PI) for the Watson/Jeopardy! project. He has been at IBM's T.J. Watson's Research Center since 1995 where he heads up the Semantic Analysis and Integration department. Dr. Ferrucci focuses on technologies for automatically discovering valuable knowledge in natural language content and using it to enable better decision making.

As part of his research he led the team that developed UIMA. UIMA is a software framework and open standard widely used by industry and academia for collaboratively integrating, deploying and scaling advanced text and multi-modal (e.g., speech, video) analytics. As chief software architect for UIMA, Dr. Ferrucci led its design and chaired the UIMA standards committee at OASIS. The UIMA software framework is deployed in IBM products and has been contributed to Apache open-source to facilitate broader adoption and development.

In 2007, Dr. Ferrucci took on the Jeopardy! Challenge – tasked to create a computer system that can rival human champions at the game of Jeopardy!. As the PI for the exploratory research project dubbed DeepQA, he focused on advancing automatic, open-domain question answering using massively parallel evidence based hypothesis generation and evaluation. By building on UIMA, on key university collaborations and by taking bold research, engineering and management steps, he led his team to integrate and advance many search, NLP and semantic technologies to deliver results that have out-performed all expectations and have demonstrated world-class performance at a task previously thought insurmountable with the current state-of-the-art. Watson, the computer system built by Ferrucci's team is now competing with top Jeopardy! champions. Under his leadership they have already begun to demonstrate how DeepQA can make dramatic advances for intelligent decision support in areas including medicine, finance, publishing, government and law.

Dr. Ferrucci has been the Principal Investigator (PI) on several government-funded research programs on automatic question answering, intelligent systems and saleable text analytics. His team at IBM consists of 28 researchers and software engineers specializing in the areas of Natural Language Processing (NLP), Software Architecture, Information Retrieval, Machine Learning and Knowledge Representation and Reasoning (KR&R). Dr. Ferrucci graduated from Manhattan College with a BS in Biology and from Rensselaer Polytechnic Institute in 1994 with a PhD in Computer Science specializing in knowledge representation and reasoning. He is published in the areas of AI, KR&R, NLP and automatic question-answering.

Keynote: Building Watson- An overview of the DeepQA Project



Eric Siegel, Ph.D., Program Chair, Predictive Analytics World

The president of Prediction Impact, Inc., Eric Siegel is an expert in predictive analytics and data mining and a former computer science professor at Columbia University, where he won the engineering school's award for teaching, including graduate-level courses in machine learning and intelligent systems - the academic terms for predictive analytics. After Columbia, Dr. Siegel co-founded two software companies for customer profiling and data mining, and then started Prediction Impact in 2003, providing predictive analytics

services and training to mid-tier through Fortune 100 companies.

Dr. Siegel is the instructor of the acclaimed training program, Predictive Analytics for Business, Marketing and Web, and the online version, Predictive Analytics Applied. He has published over 20 papers and articles in data mining research and computer science education, has served on 10 conference program committees, has chaired a AAAI Symposium held at MIT, and is the founding chair of Predictive Analytics World.

Keynote: Persuasion by the Numbers: Optimize Marketing Influence by Predicting It

For all speaker bios please visit :

<http://www.predictiveanalyticsworld.com/newyork/2011/speakers.php>

Description	Early Bird (by Sept 2)	Regular (by Oct 14)	Onsite Price
2 Day PAW Conference Pass Wednesday 10/19 & Thursday 10/20	\$1,690	\$1,890	\$2,090
2 Day PAW / Text Analytics World Combo Pass Wednesday 10/19 & Thursday 10/20	\$1,990	\$2,190	\$2,390
2 Day PAW / 3 Day eMetrics Combo Pass Wednesday 10/19 - Friday 10/21	\$2,540	\$2,790	\$3,090
Social Networking Pass Wednesday 10/19 OR Thursday 10/20 (Access to Exhibit Hall and Keynotes Only)	\$150	\$150	\$150
Exhibit Hall Only Passes Wednesday 10/19 & Thursday 10/20	\$25	\$25	\$45

PAW Workshops	Early Bird (by Sept 2)	Regular (by Oct 14)	Onsite Price
R Bootcamp: For Newcomers to R Sunday 10/16 - half day 1pm - 5pm	\$495	\$595	\$595
Predictive Analytics: Fundamentals and Use Cases Monday 10/17 - full day	\$895	\$995	\$995
Hands-On Intro to R Monday 10/17 - full day	\$895	\$995	\$995
Hands-On Business Analytics: Insights to Impact Tuesday 10/18 - full day	\$895	\$995	\$995
Driving Enterprise Decisions with Business Analytics Tuesday 10/18 - full day	\$895	\$995	\$995
Hands-On Predictive Analytics Tuesday 10/18 - full day	\$995	\$1,095	\$1,095
Predictive Modeling Methods Friday 10/21 - full day	\$895	\$995	\$995
Deploying User-Friendly Predictive Analytics Friday 10/21 - full day	\$895	\$995	\$995

Bring the Team Offer:

Each additional attendee from the same company registered at the same time receives an extra \$200 off.

Inquiries: regsupport@risingmedia.com or (717) 798-3495



Hotel Rooms and Location:

Predictive Analytics World
Hilton New York
1335 Avenue of the Americas
New York, New York
USA 10019
Tel: +1-212-586-7000
Fax: +1-212-315-1374

There are a limited number of rooms being held at the Hilton New York for \$369 a night for a Double or a King Bed for the nights of October 15th - October 23rd. To guarantee the group rate and availability, reservations must be completed by September 16th. Reservations can be made by calling the Hilton directly at 1-212-586-7000 and reference Data Driven Business Week.

Hotel Highlights

Discover Our Extraordinary New York City Hotel

See New York from a fresh new perspective at the exceptional Hilton New York hotel in Manhattan. Find a quiet respite from the city that never sleeps in our spacious and modern guest rooms and suites. Step outside our exquisite Midtown New York, NY hotel and find yourself within blocks of Central Park, Times Square, the Theatre district, 5th Avenue shopping, MOMA and so much more.

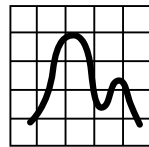
Hilton New York, New York hotel, the best of the best:

- 17 miles from JFK Airport
- 0.5 miles from MOMA
- 0.5 miles from Central Park
- 1.4 miles from 5th Avenue shopping
- 0.5 miles from the Theatre district
- 0.5 miles to Times Square

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