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Internationally recognized thought leader and expert in predictive analytics, machine learning and data science with over three decades of experience applying advanced algorithms and data preparation techniques to real-world problems in customer acquisition and churn, fraud detection, text mining, HR analytics, and more for high-tech software companies and the public sector.

- Co-Founded SmarterHQ, bringing analytics and machine learning to retail email marketing in a SaaS context. Designed and built data science and data analytics process and teams to automate building of models for 100+ retail brands, rebuilding models as needed, either daily, weekly, or monthly. Instrumental in procuring first \$7M Series A round of funding from Battery Ventures and further rounds of funding from Simon Property Group and Spring Lake Equity Partners.
- Listed in top 10 / 15 Most Influential People in Data Science or Data Analytics: KDNuggets.com (2013), <https://bigdata-madesimple.com> (2014), techbeacon.com (2019), springboard.com (2019), medium.com (2020), analyticsinsight.net (2020), <https://datascience.fm> (2021), <https://www.mygreatlearning.com> (2022)
- Highly-regarded and popular keynote and featured speaker at analytics conferences in the US and Europe including Predictive Analytics, Data Mining, and Business Intelligence conferences, including Predictive Analytics World, PASS Business Analytics, Open Data Science West, and INFORMS.
- Media appearances: Print media (including Forbes, Popular Mechanics), digital media, and radio.

EXPERIENCE

1999 - present

Owner, Abbott Analytics

Independent Consultant and Training services from 1999 to 2014, serving more than 70 clients, building predictive models and providing training and knowledge transfer internal analytics teams. Clients included (partial list):

- Department of Treasury: IRS (LMSB), Revenue Canada, Texas Comptroller of Public Accounts
- Department of Defense: US Navy, US Air Force Research Laboratory, US Marine Corps, Defense Finance Accounting Service, Sandia National Labs
- Non-Profits: YMCA
- Private Sector: MetLife, Nokia, Intel Corporation, Kaiser Permanente, Los Angeles Times, Alaska Airlines, Monsanto
- Analytics Companies: IBM, SPSS, SAS, StatSoft, Netezza, Insightful Corporation, Tibco, Teradata

Course topics (partial list)

- Data Science Bootcamp for practitioners (3-days, including entire CRISP-DM process model)
- Model Ensembles (Bagging, Boosting, Random Forests, Stochastic Gradient Boosting, Stacking)
- Randomization methods to improve model accuracy, variable selection, model interpretation, model stability assessment.
- Explaining predictive models to decision-makers

Nov 2020 - Jan 2023

Chief Data Scientist, Wunderkind

- Created new reporting engine for campaign visit and conversion attribution for all online and offline channels
- Built new product recommendation engine based on product category engagement
- Provided input into strategic vision for use of machine learning and AI in reporting and campaign automation.

2010 – Nov 2020

CoFounder and Chief Data Scientist, SmarterHQ, Inc. (acquired by Wunderkind)

- Co-Founded SmarterHQ, bringing analytics and machine learning to retail email marketing in a SaaS context. Designed and built process to automate building of models for 100+ clients, rebuilding models as needed, either daily, weekly, or monthly. Analytics backend instrumental in obtaining the first \$7M round of venture funding and future rounds.
- Served as CTO of SmarterHQ for 3 years, hiring and managing the Software Development, DevOps, and Data Science teams (more than 20). Succeeded in migrating the entire backend infrastructure from SQL Server + MongoDB to Redshift + S3 + AWS microservices.
- Customer brands included Bloomingdales, Sam's Club, American Eagle, DSW, Dillard's, Chicos, Omni Hotels, Barnes & Noble
- Typical revenue for personalizing blast email sends using the SmarterHQ platform: 50% increase in open rate; 80% increase click-through rates.
- Parametric models built automatically for each client with customized, automated, behavior-based tuning for each client. Campaigns based on these models typically generated \$1-\$2/email and an increase in average order value of 25%.
- Supervised learning purchase propensity models built automatically for each client; Predictive model based campaigns typically generated \$2-\$4/email send.
- Worked closely with executives in sales and marketing to assist in securing deals with larger brands (>\$100k ARR).

- As interim CTO (2016-2019):
 - grew the team to over 20 developers, SREs and data scientists.
 - Led full back-end architectural transition from MongoDB+SQL Server to AWS (Kinesis, SQS, S3, Redshift).
 - Obtained first ever SOC 2, Type 2 certification
 - Became GDPR compliant on time
 - Hired VP Engineering to run day-to-day operations. Led hiring replacement CTO.

1996-1999 Senior Research Scientist, Elder Research, San Diego, CA
 1994-1996 Senior Member Technical Staff, PAR Government Systems Corp., La Jolla, CA
 1991-1994 Algorithm Designer, Martin Marietta Corp., Rancho Bernardo, CA
 1987-1991 Research Scientist, Barron Associates, Inc., Charlottesville, VA

EDUCATION

University of Virginia, Master of Applied Mathematics (M.A.M.)
 (Emphasis: Control Systems and Optimal Control)
 Rensselaer Polytechnic Institute, B.S. Mathematics of Computation
 (Minor in Electrical Engineering)

COMPUTING LANGUAGES / MACHINE LEARNING TOOLS

Built and/or deployed models in languages: C, FORTRAN, Visual Basic, S, MATLAB, ANSI or MS SQL, PostgreSQL, bash, Mathematica, Maple
 Modified or Supervised models built in languages: Python, Java, dotnet
 Deployed models in and/or taught hands-on courses using tools: KNIME, IBM SPSS Modeler, Tibco Statistica, Tibco Spotfire Miner, Minitab SPM (formerly Salford Systems), SAS Enterprise Miner, TeraMiner (Teradata), Model1/PRW (Unica Corp, now IBM).

OTHER CONTRIBUTIONS, ADVISORY & TEACHING

- Author of [Applied Predictive Analytics](#) (Wiley, 2014). More than 85 reviews on amazon.com, 4.4 stars. Contracted by Wiley to produce 2nd Edition.
- Co-author of [IBM SPSS Modeler Cookbook](#) (Packt Publishing, 2013).
- Advisory board for [UC/Irvine](#) and [UCSD](#) Data Science Certificate programs
- Contributed a biographical chapter to [Journeys to Data Mining: Experiences from 15 Renowned Researchers](#) (Springer, 2012).
- Forewords for analytics books including Handbook of Statistical Analysis and Data Mining Applications (Academic Press, 2009), Practical Text Mining and Statistical Analysis for Non-structured Text Data Applications (Academic Press, 2012), and Big Data, Data Mining, and Machine Learning: Value Creation for Business Leaders and Practitioners (Wiley, 2014).
- Design and teach 3-day data science bootcamps, 1-day workshops and 1-hour conference tech talks annually.
- KDD Conference [Industrial Track Program Committee](#) and the [KDD Data Mining Case Studies Competition](#) Program Committee.