
VP | DATA SCIENCE, RESEARCH, & ENGINEERING

Accomplished executive leader and technological innovator, industry leader in controlled experiments, machine learning, personalization, and AI. Leads, motivates, and mentors high-performing teams, most recently Analysis & Experimentation at Microsoft with a mission to accelerate innovation using trustworthy analysis and experimentation.

Executive Leadership	Machine Learning & AI	Data Science & Research
Cross-Functional Team Development	C-Level Communications	Personalization
Technological Evangelist	Controlled Experiments / A/B Testing	Agile Software Development

CAREER HIGHLIGHTS

- Led Data Mining and Personalization at Amazon, where new ideas improved personalization and generated incremental revenues of hundreds of million dollars.
- Enabled the discovery of surprising new ideas using controlled experiments across Microsoft, which improved the user experience and increased revenues by hundreds of millions of dollars.
- Successfully evangelized data-driven software development using rigorous controlled experiments at Amazon and 15+ major product groups at Microsoft.
- Founded the ExP team at Microsoft and grew it as a startup within Microsoft to more than 110 data scientists, developers, and program managers. The team built the experimentation platform and provided a center of excellence for experimentation.
- Named a Technical Fellow and Corporate Vice President at Microsoft, one of about 40 Technical Fellows among 250 VPs of 140,000+ Microsoft employees (<0.2%).
- Named the [5th most influential scholar in AI](#) and the 26th in Machine Learning (AMiner, 2016).
- Extensive publication history, with more than [42,000 citations](#), three machine learning papers in the [top 1,000 most-cited papers in Computer Science](#), best paper award, and [Harvard Business Review article](#).
- Introduced practical improvements to the theory and scale of controlled experiments that have been published in peer-reviewed articles and implemented by other companies.
- Top Quora-viewed writer in [A/B Testing](#).
- Granted 15 patents in Machine Learning, Visualization, and Experimentation

WORK EXPERIENCE

MICROSOFT

Technical Fellow and Corporate Vice President | Analysis & Experimentation | Cloud & AI *09/2018 – Present*
Distinguished Engineer and General Manager | Analysis & Experimentation | AI & Research *3/2014-08/2018*

- ⌘ Evangelized data-driven software development using rigorous controlled experiments at Microsoft, enabling improvements in user experience and surprising ideas that generated incremental revenue of hundreds of millions of dollars.
- ⌘ Grew the experimentation platform (ExP) team to over 110 Data Scientists, Developers, and Program Managers to accelerate innovation at Microsoft through trustworthy analysis and experimentation.
- ⌘ Platform now used to run 25,000+ experiment treatments per year (about 100 new per workday) across more than 15 major Microsoft product groups, including Bing, Edge, Exchange, Identity, MSN, Office client, Office online, Photos, Skype, Speech, Store, Teams, Windows, and Xbox.
- ⌘ Oversee data scientists, who provide a center of excellence for analysis and experimentation for Microsoft.

Partner Architect | Bing | Online Services Division

10/2010 - 03/2014

- ⊖ Enabled trustworthy and scalable experimentation at Bing, championing metrics, processes, and algorithms that improved trust, and provided clear data for decision-making.
- ⊖ Introduced A/A tests, correctness tests, variance reduction techniques, and Overall Evaluation Criterion (OEC) for user-experience vs. revenue tradeoff (Ship User Value).
- ⊖ Designed and helped execute an important slowdown experiment that showed the value of performance for Bing: each 10msec improvement in server performance generates incremental profit to fund an engineer.

General Manager | Experimentation Platform

06/2005 - 10/2010

- ⊖ Founded the Experimentation Platform team, later merged into Bing, enabling the scalable execution and analysis of controlled experiments on websites and services at Microsoft.
- ⊖ Developed and led the Dev, Test, PM, Analyst, Ops, and Support teams, comprising 50 high-performing members, including six principal-level team members.

AMAZON**Director | Data Mining & Personalization**

09/2003 - 06/2005

- ⊖ Headed multiple teams, including ad automation (SEO/SEM), consumer behavior/data mining, experimentation, automated email, and two personalization teams.
- ⊖ Introduced multiple features with total incremental revenue of several hundred million dollars.
- ⊖ Grew Amazon's Data Mining & Personalization organization from 50 to 90+ people.

BLUE MARTINI SOFTWARE**Vice President | Business Intelligence, Senior Director | Data Mining Applications**

10/1998 - 07/2003

- ⊖ Led the Analytic Services and Business Intelligence Sales Demo teams throughout Blue Martini's IPO in 2001
- ⊖ Led engineering team responsible for data collection, transfer (ETL), analysis, reporting, visualization, and campaign management for Blue Martini's product suite.
- ⊖ Designed, architected, and performed initial Java coding for data mining, reporting, and transfer models.
- ⊖ Joined the startup as employee Number 10.

PAST WORK EXPERIENCE**Silicon Graphics, Inc.** | Manager | MineSet

1995 – 1998

Stanford University | Project Leader, MLC++, the Machine Learning Library in C++

1993 - 1995

IBM Research Center | Programmer | Verification Group (intern, continued afterwards)

1991

Israeli Defense Forces | Computer Center Manager | Lieutenant

1985 - 1988

Selected Publications and Keynotes

- A study of cross-validation and bootstrap for accuracy estimation and model selection (1995), over 10,000 citations according to [Google Scholar](#)
- Wrappers for feature subset selection (with G. John, 2017), [top 300](#) most cited paper in Computer Science
- Book: **Trustworthy Online Controlled Experiments: A Practical Guide to A/B Testing** (exp Q4 2019) Co-author with Diane Tang from Google and Ya Xu from LinkedIn
- [The Surprising Power of Online Experiments](#), Harvard Business Review (2017)
- [Online Controlled Experiments: Lessons from Running A/B/n Tests for 12 years](#), KDD 2015 Keynote

EDUCATION**STANFORD UNIVERSITY:** Ph.D. Machine Learning, Computer Science | 1991-1995

Passed Ph.D. qualifying exam with distinction

TECHNION, Israel: Bachelor of Arts, Computer Science, Summa Cum Laude | 1988-1991

President's award (top 5%) each year of degree