Serge Sverdlov, Ph.D., CFA

401 100th Ave NE, Apt 109, Bellevue, WA 98004, (425) 818-5175, Serge@RedmondAnalytics.com

Summary

- 10 years at Microsoft, both in software engineering and statistical and financial modeling
- Risk modeling expert, co-designer of the GARP FRM exam (on FRM Committee 2006-2016)
- Caltech BSCS/Econ, UW Statistics Ph.D. completed largely while at Microsoft
- Management experience (corporate & startup), technical mentorship and teaching
- Committed to simple practical solutions, experienced in translating between management and tech
- Can build or grow data science team by mentoring, establishing process, pragmatic tech selection.

Technical Skills and Interests

- **Programming** in Python/R; C/C++/C#/Java; distributed computing; wrote compiler as Caltech project
- **Stochastic Modeling** including likelihood based and Bayesian/MCMC methods
- **Statistical Genetics** including association and pedigree/linkage, phylogenetic and IBD inference
- **Data Science** and **Machine Learning** tools; predictive modeling, kernel methods, neural nets
- **Optimization:** applied linear/MIP modeling, convex/general optimization, dynamic programming
- **Economics:** auction and mechanism design, game theory, optimal payment/pricing models

Experience

Jun 2014 - Present: **Principal Consultant**, Redmond Analytics LLC

- Primary contract: forecasting and dynamic plan optimization for Microsoft Azure expansion
- Tools: R, Python, time series and Bayesian computation in a cloud-scale environment

Jun 2014 - Present: **Part Time Lecturer,** University of Washington, Statistical Software (R, SAS, Python)

Aug 2004 - Jan 2012: **Senior Quantitative Manager**, Treasury Risk Management Group, **Microsoft**

- Risk management for corporate $40-70 bln multi-asset-class portfolio and hedging programs
- Monte Carlo simulation and risk management modeling with Barra and RiskMetrics tools
- Original projects on "correlation one" crisis risk, indirect "what if" scenario analysis, inflation risk
- Supervised and trained 5 MS/MBA level staff over time; taught financial risk corporate training unit

Jun 2002 - Jul 2004: **Software Design Engineer**, Developer & Windows Server Division, **Microsoft**

- Distributed Visual Studio; XML web services and security; protocol negotiation engine
- Primarily C#, one awarded US patent

Jun 2001 - Jun 2002: **Caltech/NSF Entrepreneurial Fellow**, Centoid Project

- Developed Micropayment and Billing Cycle Optimization technology that led to funding award
- Led team of 5 (4 Caltech BSCS + decision theory Ph.D.)

Education

2014: **Ph.D.**, Statistics, University of Washington (US News top 3 ranked program)

- Statistical Genetics track, Computing (Machine Learning) and Stochastic Modelling sequences
- Advisor: Elizabeth A. Thompson (dept chair, member National Academy of Sciences)
- Completed Ph.D. program while at Microsoft

2011: **M.S.**, Statistics, University of Washington
2009: Graduate Certificate, Statistical Genetics, University of Washington
2007: Chartered Financial Analyst (**CFA**)
2001: **B.S.** with Honors, Engineering & Applied Science (Computer Science) and Economics
with Certificate in Engineering Management, California Institute of Technology (Caltech)

Misc Experience

Teaching: Lecturer: U of W Probability, Stat. Computing; TA 6 Caltech classes (CS, Entrepreneurship)
Startups: Advisor and investor in several startups; NSF Innovation Corps Business Mentor
Hobbies: Writing children's books featuring elephant and telepathic cat humor