Ryan McCorvie

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WORK EXPERIENCE

Epoch AI: *(Sep 2025-Nov 2025) Data Researcher*

- Researched production capacity of TSMC wafer fabs. Found a source for data center construction starts

California Department of Public Health: *(2020-2023) Consulting Statistician during COVID*

- Managed data flows and model aggregation for CalCat, the State of California's COVID forecasting tool
- Managed relationships with the State's numerous academic partners, summarizing and integrating academic models into the state decision process
- Performed decision analysis for policy proposals, including: testing policies at state hospitals, school reopening
- Devised and maintained the "simple growth model", a baseline model for forecasting hospital capacity. Devised an immunity model incorporating state vaccination records and covid case reports, with fine level geographic and demographic granularity

Martingale Group: *(2019 - Present) Founder and Chief Analyst*

- Private consulting

Goldman, Sachs & Co: *(1999 - 2013) Strategist, Quantitative Analyst, Financial Engineer*

- During the 2008 credit crisis, I was Managing Director of the team responsible for all quantitative valuation and risk management models on the credit default swap and corporate bond trading desks
- Managed the development of Freddie, a parallel in-memory database for tracking risk exposures and profits in real time.
    - The system unified a previously separate system for bonds and derivatives. Key stats: ~1,000 analytics computed against ~100,000 deals on ~1,000 underlying entities with ~1,000 counter-parties, ~100 compute nodes, >1 TB memory used for the compute graph
- Recruited, trained and managed dozens of quants and developers, overseeing a global team spanning five trading desks

- Hired as the Data Czar in charge of maintaining the firm's Time Series Database (TSDB), a repository of financial prices and economic data. Responsible for the library of analytics for doing time series analysis.
- Represented GS in industry consortia and internally lead the implementation of new processes resulting from changing regulatory frameworks (such as Volker rule) and market structure change (such as clearinghouses)
- Developed detailed scenario analysis for many crisis situations, including the Lehman bankruptcy, the Greek debt exchange, and dozens of other corporate and sovereign credit events

Internships at: **Center for Advanced Computing Research,** building Linux supercomputer clusters ("Beowulf"), a **Summer Undergraduate Research Fellowship** with Dr Jehoshua Bruck researching complexity classes of neural logic circuits and the **NASA Jet Propulsion Laboratory** where I simulated the Martian surface for the Mars Pathfinder rover

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Academic Experience

UC Berkeley — Ph. D. Statistics candidate *(2014 - 2020, withdrew) Advisors: Steven Evans & Lisa Goldberg*

Coursework in Statistical Learning Theory, Machine Learning, Theoretical Statistics, Probability, Harmonic Analysis, Partial Differential Equations

Research focuses:

- Stochastic processes which exhibit cascades or crashes or contagion. Point processes, variations on branching processes and the Hawkes process.
- Principal component analysis and factor analysis in high dimensions, with applications to financial portfolios. Shrinkage methods
- Gaussian processes in machine learning, with applications to risk factors in financial markets

California Institute of Technology — B.S. Mathematics

Winter Park High School — International Baccalaureate Diploma

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Miscellaneous

Citizenship: United States of America

Finalist in the USA Computing Olympiad (1995). Top 100 in the Putnam mathematics competition (1998)

Interests: backgammon, music production (Ableton), raspberry pi, twitch streaming of LEAN theorem proving