

- Education
- **BA**, Cornell University, cum laude in mathematics, May 2001
 - **PhD**, University of California at Davis, mathematics, Dec 2007
 - **MS**, Rutgers, mathematical finance, Jan 2014
- Employment
- **APY.Finance**
Aug 2020 - current, *Blockchain development & devops*
 - Created contracts and deployments for governance token and liquidity mining with 80 million USD in total value locked.
 - **Capital One**
Apr 2019 - Nov 2020, *Senior engineer / tech lead*
 - As hands-on lead for Python-based access to data lake, plan roadmap, create work items, maintain best practices in coding and testing.
 - Collaborate cross-functionally with data scientists and machine learning group to gather requirements for environments ranging from laptops to distributed clusters.
 - **LoanStreet Inc.**
Mar 2018 - Feb 2019, *Senior software engineer in financial technology*
 - Re-architected loan syndication tech stack using domain-driven design.
 - Managed work items for a team of 4 and gathered requirements.
 - As hands-on lead, wrote core Python libraries for event-sourced microservices communicating through RabbitMQ & REST, created Docker configurations, and set standards from code quality to Git workflow and CI.
 - **MIO Partners** (McKinsey & Co subsidiary)
Mar 2016 - Feb 2018, *Quant developer for trading*
 - Created Python-based portfolio management tools which are used interactively for analysis and as components in report-generation processes deployed in Docker containers.
 - Created and maintained daily trading opportunity charts reviewed by the CEO. Data was processed from a variety of sources including emails and databases.
 - As project manager, gathered requirements for a web app (React JS and Python), coded back-end computations, and managed two front-end developers.
 - **JP Morgan Chase**
Mar 2015 - Mar 2016, *Quant developer for regulatory capital*
 - Automated Excel and Access-based manual processes as robust server processes, with event-driven GUI, using proprietary Python-based environment (Athena).
 - Frequent communication and signoffs from business users were required, with careful documentation showing accuracy of results.
 - **Nomura**
Feb 2014 - Mar 2015, *Front office developer for electronic trading*
 - Created a low-latency order book generator that used Tibco Rendezvous to aggregate market-data and pricing and communicate with smart order router and GUI (Java/Linux).
 - Primary maintainer of automated market-maker for USD swaps and swap futures.
 - Created a FIX trade feed from ION trading platform into trade management system.
 - **Nomura**
2013, *Intern for equities connectivity team*
 - **University of California, Davis**
2012 Lecturer
Head instructor for courses in calculus, linear algebra, and probability
 - **Bard College**, BHSEC program
2009 - 2011, Assistant Professor
Oversaw the development of accelerated math curriculum for early college program.
 - **University of Victoria**
2008 - 2009, PIMS Postdoctoral Fellow
Conducted mathematical research in low-dimensional topology
- Fellowships
- Pacific Institute for the Mathematical Sciences Postdoctoral Fellowship
 - National Science Foundation VIGRE Fellowship (4 years)
- Personal
- Naturalized U.S. Citizen; moved to the U.S. at age eight.