

Education	<ul style="list-style-type: none"> ○ 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	<ul style="list-style-type: none"> ○ Capital One Apr 2019 - current, <i>Senior engineer / tech lead</i> <ul style="list-style-type: none"> ● As lead for Python-based access to data lake, gather requirements for machine learning group while proactively identifying and addressing usability pain points. ● Architect a consistent interface for both local and distributed computing needs. ○ LoanStreet Inc. Mar 2018 - Feb 2019, <i>Senior software engineer in financial technology</i> <ul style="list-style-type: none"> ● Re-architected loan syndication tech stack using domain-driven design to facilitate interaction with the business and ensure closer adherence to business rules. ● Created and managed issues for a team of 4. Collaborated with the business on functional testing. ● 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, <i>Quant developer for trading</i> <ul style="list-style-type: none"> ● 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, <i>Quant developer for regulatory capital</i> <ul style="list-style-type: none"> ● 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, <i>Front office developer for electronic trading</i> <ul style="list-style-type: none"> ● 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, <i>Intern for equities connectivity team</i> ○ University of California, Davis 2012 Lecturer <i>Head instructor for courses in calculus, linear algebra, and probability</i> ○ Bard College, BHSEC program 2009 - 2011, Assistant Professor <i>Oversaw the development of accelerated math curriculum for early college program.</i> ○ University of Victoria 2008 - 2009, PIMS Postdoctoral Fellow <i>Conducted mathematical research in low-dimensional topology</i>
Skills & Abilities	<ul style="list-style-type: none"> ○ Programming languages: Python (4.5 years), Java (1.5 years) ○ Work experience in a Linux server environment, using Unix tools (grep, awk, sed, vi(m), etc.) ○ Experienced on backend (Linux, Postgres, etc.) with facility on frontend (Django, React)
Fellowships	<ul style="list-style-type: none"> ○ Pacific Institute for the Mathematical Sciences Postdoctoral Fellowship ○ National Science Foundation VIGRE Fellowship (4 years)
Personal	<ul style="list-style-type: none"> ○ Naturalized U.S. Citizen; moved to the U.S. at age eight.