

Education	<ul style="list-style-type: none"> <li>◦ <b>BA</b>, Cornell University, cum laude in mathematics, May 2001</li> <li>◦ <b>PhD</b>, University of California at Davis, mathematics, Dec 2007</li> <li>◦ <b>MS</b>, Rutgers, mathematical finance, Jan 2014</li> </ul>
Employment	<ul style="list-style-type: none"> <li>◦ <b>Capital One</b> Apr 2019 - current, <i>Principal software engineer</i></li> <li>◦ <b>LoanStreet Inc.</b> Mar 2018 - Feb 2019, <i>Senior software engineer in financial technology</i> <ul style="list-style-type: none"> <li>• Re-architected loan syndication tech stack using domain-driven design to facilitate interaction with the business and ensure closer adherence to business rules</li> <li>• Created and managed GitHub issues for team of 4 developers. Engaged in business-driven development testing with project manager.</li> <li>• As hands-on lead, wrote core Python libraries for event-sourced microservices which communicated via RabbitMQ and REST, created Docker configurations, and set standards from writing and testing code to Git workflow and continuous integration</li> </ul> </li> <li>◦ <b>MIO Partners</b> (McKinsey &amp; Co subsidiary) Mar 2016 - Feb 2018, <i>Quant developer for trading</i> <ul style="list-style-type: none"> <li>• Created Python-based portfolio management tools which are used interactively for analysis and as components in report-generation processes deployed in Docker containers.</li> <li>• Created and maintained daily trading opportunity charts reviewed by the CEO. Data was processed from a variety of sources including emails and databases.</li> <li>• As project manager, gathered requirements for a web app (React JS and Python), coded back-end computations, and managed two front-end developers.</li> </ul> </li> <li>◦ <b>JP Morgan Chase</b> Mar 2015 - Mar 2016, <i>Quant developer for regulatory capital</i> <ul style="list-style-type: none"> <li>• Automated Excel and Access-based manual processes as robust server processes using proprietary Python-based environment (Athena).</li> <li>• Worked on back-end processes and event-driven GUI design, following the Agile methodology, including thorough test coverage.</li> <li>• Frequent communication and signoffs from business users were required, with careful documentation showing accuracy of results.</li> </ul> </li> <li>◦ <b>Nomura</b> Feb 2014 - Mar 2015, <i>Front office developer for electronic trading</i> <ul style="list-style-type: none"> <li>• 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).</li> <li>• Primary maintainer of automated market-maker for USD swaps and swap futures.</li> <li>• Created a FIX trade feed from ION trading platform into trade management system.</li> </ul> </li> <li>◦ <b>Nomura</b> 2013, <i>Intern for equities connectivity team</i></li> <li>◦ <b>University of California, Davis</b> 2012 Lecturer <i>Head instructor for courses in calculus, linear algebra, and probability</i></li> <li>◦ <b>Bard College</b>, BHSEC program 2009 - 2011, Assistant Professor <i>Oversaw the development of accelerated math curriculum for early college program.</i></li> <li>◦ <b>University of Victoria</b> 2008 - 2009, PIMS Postdoctoral Fellow <i>Conducted mathematical research in low-dimensional topology</i></li> </ul>
Skills & Abilities	<ul style="list-style-type: none"> <li>◦ Programming languages: Python (4 years), Java (1.5 years)</li> <li>◦ Work experience in a Linux server environment, using Unix tools (grep, awk, sed, vi(m), etc.)</li> <li>◦ Able to digest new quantitative literature from a top-down, conceptual viewpoint</li> </ul>
Fellowships	<ul style="list-style-type: none"> <li>◦ Pacific Institute for the Mathematical Sciences Postdoctoral Fellowship</li> <li>◦ National Science Foundation VIGRE Fellowship (4 years)</li> </ul>
Personal	<ul style="list-style-type: none"> <li>◦ Naturalized U.S. Citizen; moved to the U.S. at age eight.</li> </ul>