

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 History	<ul style="list-style-type: none"> <li>◦ <b>LoanStreet Inc.</b> 2018 - current, <i>Software engineer for financial technology</i> <ul style="list-style-type: none"> <li>• Gather and translate requirements for loan origination and trading business.</li> <li>• Rebuild Django backend with greater accuracy and scalability due to rapid growth as primary objectives.</li> </ul> </li> <li>◦ <b>MIO Partners</b> (McKinsey &amp; Co subsidiary) 2016 - 2018, <i>Quant developer for trading</i> <ul style="list-style-type: none"> <li>• Designed Python-based portfolio management tools following object-oriented principles. Tools 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> 2015 - 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> 2014 - 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>◦ Able to self-manage and rapidly iterate while gathering and updating requirements.</li> <li>◦ Programming languages: Python, Java, C</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>
Papers	<ul style="list-style-type: none"> <li>◦ “Boundary-Twisted Normal Form and the Number of Elementary Moves to Unknot”, <i>New York J. Math</i> 18 (2012) 389-408.</li> <li>◦ “The Unknotting Problem and Normal Surface Q-Theory”, <i>Journal of Knot Theory and Its Ramifications</i>, accepted for publication</li> </ul>
Fellowships & Scholarships	<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> <li>◦ Rutgers MSMF Gary Chropuvka Scholarship Award</li> </ul>

Personal

- Naturalized U.S. Citizen; moved to the U.S. at age eight.