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| 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"> ◦ Curve DAO April 2022 - current, <i>Software Engineer / Researcher</i> <ul style="list-style-type: none"> • Develop Python package for simulating risk-reward scenarios for Curve pools. • Advise protocols in managing risk-reward of exposures often in 10-100m USD. • Provide analysis and smart contract auditing to risk team as needed. ◦ APY Finance Aug 2020 - Aug 2022, <i>Lead engineer, smart contracts and backend services</i> <ul style="list-style-type: none"> • Created and deployed contracts controlling \$80M TVL (Solidity and Ethers/Hardhat). • Architected unique system to securely manage and value a portfolio of Convex positions. • Created and maintained backend calculations and REST services. ◦ Capital One Apr 2019 - Nov 2020, <i>Senior engineer / tech lead</i> <ul style="list-style-type: none"> • As hands-on lead for Python-based data lake access, planned roadmap, created work items, established best practices in coding and testing. • Collaborated cross-functionally with data scientists and ML group to craft requirements for diverse environments from laptops to distributed clusters. ◦ 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. • Managed team of 4, gathered requirements, set best practices for code quality, Git, and CI. • Wrote Docker files and Python libraries for event-sourced microservices using RabbitMQ. ◦ 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 used interactively for analysis and as components in report-generation processes deployed in Docker containers. • Created and maintained daily trading opportunity charts reviewed by CEO. Data was processed from a variety of sources including emails and databases. ◦ 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 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. ◦ 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> |
| Personal | <ul style="list-style-type: none"> ◦ Naturalized U.S. Citizen; moved to the U.S. at age eight. |