Alexander Bernstein

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: alexbstl

Education

University of California, Santa Barbara — Santa Barbara, CA
Ph.D. in Statistics — *Dec. 2023 (est.)*

Washington University in St. Louis — St. Louis, MO
M.Sc. in Systems Science and Applied Mathematics — *Dec. 2016*
B.A. in Mathematics and Economics, (Cum Laude) — *May 2014*

Projects

Presentations

Explicit Solutions for Position Constrained Minimum Variance Portfolios

- SIAM Conference on Appiled and Computational Discrete Algorithms, **Online Poster** — *July 2021*
- CDAR Risk Seminar, UC Berkeley — *Mar. 2020*

Publications

- Explicit Solutions for Position Constrained Minimum Variance Portfolios — *In Preparation*
- Dynamic Clearly and Contagion Financial Networks — *In Review*

`https://doi.org/10.48550/arXiv.1801.02091`

Work Experience

University of California, Santa Barbara — Santa Barbara, CA
Teaching Assistant, Various Classes — *Sept. 2017-Present*

- Lectured and tutored students on course material
- Assisted in the administration of many courses and graded student work
- Courses include: Statistical Theory, Stochastic Processes, Regression Analysis, Financial Mathematics, Risk Theory

Graduate Student Mentor — *2020-2023*

- Guided undergraduate students on projects involving Financial Mathematics and Optimization
- Assisted students in preparation of poster presentation and formal report about results of their research

Epic Systems — Madison, WI
Technical Services Engineer — *Sept. 2014 - Sept. 2015*

- Assisted customers in the usage of their Electronic Medical Records system
- Diagnosed customer requests and assisted in tailoring software to fit their needs
- Developed and implemented changes to the Epic Codebase

Prozess Technologie — St. Louis, MO
Intern — *May 2013- May 2014*

- Created a computational simulations to explore effectiveness of laboratory equipment
- Tested, calibrated and validated laboratory equipment used in pharmaceutical manufacturing

Skills

Technical Knowledge

- Expertise in convex optimization and statistical analysis
- Strong knowledge of mathematical foundations of statistics, probability, stochastic analysis, data science, options pricing, and risk analysis.

Programming Languages

- Strong working knowledge of R, Matlab, Python, NumPy, SciPy, scikit-learn, Pandas, and Linux.
- Experience with PyTorch, C, Java, JavaScript, nodeJS, SQL, AWS, Git.