

Alexander Bernstein

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: alexbstl

Education

University of California, Santa Barbara

Ph.D. in Statistics

Santa Barbara, CA

Dec. 2023 (est.)

Washington University in St. Louis

M.Sc. in Systems Science and Applied Mathematics

B.A. in Mathematics and Economics, (Cum Laude)

St. Louis, MO

Dec. 2016

May 2014

Projects

Presentations

Analytical Solutions To The Constrained Markowitz Problem Via Fixed Point Theory

- INFORMS Annual Meeting

Oct. 2023

Explicit Solutions for Position Constrained Minimum Variance Portfolios

- SIAM Conference on Applied 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

Teaching Assistant, Various Classes

Santa Barbara, CA

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

Technical Services Engineer

Madison, WI

Sept. 2014 - Sept. 2015

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

Prozess Technologie

Intern

St. Louis, MO

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 Statistics, Probability, Stochastic Analysis, Machine Learning, Data Science, Options Pricing, and Risk Analysis

Programming Languages and Software

- Strong Knowledge: R, Matlab, Python, NumPy, SciPy, Scikit-Learn, Pandas, and Linux.
- Working Knowledge: PyTorch, C, Java, JavaScript, NodeJS, SQL, MongoDB, AWS, Git, Inter-systems Caché