

Alexander Bernstein

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 alexbstl

Education

University of California, Santa Barbara

Ph.D. in Statistics

Santa Barbara, CA

June 2025

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

Project Experience

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

- Asymptotics of Quadratic Forms on a Simplex
- Dynamic Clearly and Contagion Financial Networks
<https://doi.org/10.48550/arXiv.1801.02091>

In Preparation

In Review

Relevant Experience

University of California, Santa Barbara

Teaching Assistant, Various Classes

Santa Barbara, CA

Sept. 2017- June 2025

- Utilized expertise in areas such as Statistical Theory, Stochastic Processes, Regression Analysis, Time Series, Financial Mathematics, and Risk Theory to teach students
- Developed and graded student coursework

Graduate Student Mentor

Dec. 2019-June 2024

- Guided undergraduate students on projects involving Financial Mathematics and Optimization
- Directed 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

- Supported customers in the usage of their Electronic Medical Records system
- Diagnosed customer requests and tailored software to fit their needs
- Developed and implemented improvements 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, Time Series Analysis, Data Science, Options Pricing, and Risk Analysis

Programming Languages and Software

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