

# Alexander Bernstein

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 alexbstl

## Education

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### 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

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### Presentations

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

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### 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

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### 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