

# Alexander Bernstein

Email: alexbstl@gmail.com, Cell: 314-283-0026

 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 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

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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 that explored applications of Financial Mathematics and Convex 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 assisted in tailoring 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 simulation of fluorescence to compare effectiveness of laboratory equipment to theoretical predictions

• Tested, calibrated and validated scientific laboratory equipment used in pharmaceutical manufacturing

## Skills

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### 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.