

Education

University of Pennsylvania (the Wharton School)

Philadelphia, PA, 2018–Present

Ph.D. Student in Statistics: GPA 3.8/4.0

Stanford University

Stanford, CA, 2017–2018

M.S. in Statistics, GPA: 3.6/4.3

Yale University

New Haven, CT, 2011–2015

B.A. in Applied Mathematics, cum laude, GPA: 3.8/4.0

Experience

Teaching Assistant, *Wharton, University of Pennsylvania*

Philadelphia, PA, Spring 2019–Present

- STAT 102: Intro Business Stat, STAT 613: Regression Analysis for Business.
- Hold office hours, lead review sessions, write homework solutions, organize homework graders, grade exams.

Research Assistant, *Stanford Center on Poverty and Inequality*

Stanford, CA, Spring 2018–Summer 2018

- Research assistant to Professors Adrian Raftery and David Grusky.
- Refine and develop methodologies to analyze contingency tables of longitudinally-linked Census data, providing evidence on contemporary social mobility as well as new insights into long-term trends in social mobility.

Course Assistant, *Stanford University*

Stanford, CA, Fall 2017–Winter 2018

- CS 106A: Programming Methodology, CS 161: Design and Analysis of Algorithms.
- Lead one to two recitation sections per week, provide thoughtful feedback through homework and exam grading, and meet with students individually to discuss their homework and progress in the course.

Software Developer, *Lawrence Livermore National Laboratory*

Livermore, CA, Summer 2015 - Fall 2017

- Created a Bravais lattice generation framework to automate mesh formation in a topological optimization research code. Implemented a neural network to assist in the selection of lattice parameters.
- Member of team integrating a GPU portability abstraction into ALE3D's advection package. Conducted and presented research internally on implications of strided memory access patterns on GPU-accelerated computing.
- Parallelized, refined, and integrated a domain decomposer, Recursive Inertial Bisection, into the mesh generation step of ALE3D, a multi-physics "Arbitrary Lagrangian-Eulerian 3D" numerical simulation code. Primary developer, and user support resource, for LLNL's ParticlePack code.
- Division representative for Livermore's Girls Who Code advisory board.

Publications & Presentations

Optimal, Truthful, and Private Securities Lending, Emily Diana, Michael Kearns, Seth Neel, and Aaron Roth, *NeurIPS 2019 Workshop on Robust AI in Financial Services: Data, Fairness, Explainability, Trustworthiness, and Privacy* (Oral Presentation).

Distribution Estimation with Doubly Censored Data, Emily Diana, *Wharton Statistics Student Seminar Day*, 2019.

Tripling Lulesh: Performance Implications of Data Layouts in GPU-Accelerated Computing, Emily Diana, *Lawrence Livermore National Laboratory*, 2016.

Domain Decomposition with Recursive Inertial Bisection (Poster), Emily Diana, mentors Peter Robinson, Aaron Fisher, and Jamie Bramwell, *Grace Hopper Conference*, 2016, and *LLNL*, 2016.

Maintaining Bipartite Structure with a Modified Louvain Algorithm (Senior Thesis), Emily Diana, adviser Daniel Spielman, *Yale University*, 2015.

Partitioning Bipartite Graphs: A Modified Louvain, Emily Diana, *Yale Day of Data*, Paper 8, 2015, <http://elischolar.library.yale.edu/dayofdata/2014/Posters/8>.

Skills

Programming Languages: Haskell, C++, C, R, Python, MATLAB, Scheme, Java, CUDA

Tools and Computing Packages: Linux, Vim, MPI, Git, NVVP, L^AT_EX, TotalView, VisIt, GDB, Valgrind

Awards

Weapons Simulation and Computing Program Development Silver Star Award (2017), Yale Glee Club Vocal Scholarship (2011-2013), AP Scholar with Distinction (2011), Harvard Book Award (2011), Eugene Atwood Scholarship (2011), National Merit Finalist (2010), Runner-Up in Congressional Art Competition (2010).