

Education

University of Virginia, Charlottesville VA

Aug 2019- May 2025

PhD in Physics, Condensed Matter Theory

- Computational physics and stochastic processes under the supervision of Prof. Marija Vucelja
- 3 first author publications, 1 equal author publication --Google Scholar
  - Awarded dissertation year fellowship

University of Virginia, Charlottesville VA

Aug 2014 - May 2018

B.S. in Physics

Work experience

Department of Defense (DoD) High Performance Computing Intern

Jun 2024 - Aug 2024

Naval Research Lab (NRL), Washington DC

- 10 week internship working with computational fluid dynamics (CFD) and aero-optics in C++
- Writing code in C++ to model turbulence in high mach number simulations using finite volume and finite element methods

Undergraduate and Graduate Researcher

Aug 2016 - May 2025

University of Virginia, Charlottesville VA

- 8+ years experience in programming in Python, C++, and Mathematica with an emphasis on simulating stochastic systems and computational fluid dynamics
- Studied solutions to stochastic PDE's and probability theory
- 4 publications --Google Scholar

Extracurricular activities

- Built the website for UVA Society of Physics Students --https://spsatuva.github.io
- Member of UVA Math Club

Aug 2016 - May 2018

Aug 2016 - May 2018

Research projects

- Personal project where I built my own model using the American Airlines API to predict if a flight will sell out or be oversold based on probability theory and statistical learning. I Used python scrapper and API tool along with pytorch to do data analysis and statistical learning
- Final project for statistical learning class using airplane crash data. Performed data collection, data cleaning, parameter estimation, and Bayesian data analysis to determine if commercial airplane crashes follow a Poisson distribution

Aug 2024

Dec 2022

Milestones

- UVA physics department dissertation year fellowship
- 2nd place for most outstanding research project at UVA physics department poster competition
- 2nd place for most outstanding oral presentation at UVA undergraduate research symposium

Aug 2024 - May 2025

April 2024

April 2018

Soft skills

- Team player
- Persistent
- Highly motivated
- 2.5 years of teaching experience

Interest

- Chess
- Finance
- Law
- Weather modeling

Relevant skills

- Python
- Pandas
- Mathematica
- C++
- Pytorch
- MatLab