

# PRANAV AHLUWALIA

## CONTACT INFO

### PHONE

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## LINKS

[Portfolio](#)

[Blog](#)

[Linkedin](#)

[GitHub](#)

## SKILLS

Machine Learning

Probabilistic Modeling

Algorithm Design

Linux

Git

Java

R

SQL

Python

C++

## EDUCATION

### MS Applied Mathematics, Northeastern University

Boston

Sep 2021 — May 2023

**Awards:** Double Husky Scholar, College of Science Scholar (-30% tuition)

**Courses:** Probability I, Statistical Learning Theory

### BS Computer Science/Math, Northeastern University

Boston

Sep 2017 — May 2022

**Courses:** Calculus III, Linear Algebra, Group Theory, Stochastic Processes, Differential Equations, Computational Logic, Algorithms, Number Theory, AI, Object Oriented Design, Computation Theory, Real Analysis, Mathematical Stats

## EXPERIENCE

### Software Engineer Co-op, AcadiaSoft

Norwell, MA

Sep 2020 — Dec 2020

- Developed software infrastructure for margin call analytics platform
- Automated merges on financial data dealing with peer metrics/exposure/risk
- Optimized data loading to boost client-side performance (**SQL, Python**)

### Software Engineer Intern, Dell Technologies

Hopkinton, MA

Jun 2020 — Jul 2020

- Constructed an internal threat intelligence platform using **Python** and **Flask**
- Integrated 3 data pipelines to map emerging vulnerabilities to asset exposure
- Designed 4 interactive visualizations to aid in threat remediation

### Research Mentorship Program, UCSB Statistics Dept

Santa Barbara, CA

Jun 2016 — Jul 2021

- [Co-Authored research paper](#) on ARIMA based trading strategies

### Cyber Security Co-op, MITRE

Bedford, MA

Jul 2019 — Dec 2021

- Developed command line parsing software for large-scale server-log analysis
- Optimized **Kibana dashboards** for forensic analysis of network activity

### Cyber Security Intern, MITRE

Bedford, MA

May 2018 — Aug 2018

- Developed an interactive visualization suite to process live radar signal data
- Performed **cluster analysis** on 500,000 binaries

## PROJECTS

### Volatility Index Markov Model

- [Designed a markov chain model](#) to simulate the Volatility Index (VIX)

### Greenhouse Harvest Prediction

- Developed a **kernel ridge regression** model to [predict rose harvests](#)

### Monte Carlo Options Pricer

- [Monte carlo options pricer](#) for vanilla call option using Black-Scholes