

# ARNAV GATTANI

408-901-9131 | agattani@seas.upenn.edu

 -arnavgatt |  agattani123

## Education

### University of Pennsylvania

M.S. in Engineering, Computer Science (Accelerated Masters) | GPA: 3.9

B.S. in Engineering, Computer Science and Physics (Double Major)

Minors: Mathematics, Data Science, and Statistics

Philadelphia, PA

Expected: May 2025

### Valley Christian High School

Weighted GPA: 4.46 (Top of Class) | ACT: 35/36 | SAT II Math: 800, Physics: 720

San Jose, CA

Aug 2016 – Jun 2020

## Technical Skills

**Coursework:** Advanced Topics in Algorithms: Randomized Algos (Doctoral level); Computational Complexity (Doctoral level); Data Structures; Probability; Discrete Math; Partial Differential Equations; Linear Algebra; Big Data Analytics; Software Engineering; Ethical Algorithm Design; Operating Systems; Machine Learning; Scalable Cloud Computing

**Proficient Languages:** Java, JS, Python, SQL, C++, HTML/CSS, LaTeX

**Intermediate/Learning:** OCaml, Bash, Matlab, R, Git, Swift, MongoDB

## Project Experience

**BullBets (Algorithmic Trading Software)** | C++, Python, MongoDB, Swift

June 2021 – present

- Developed full-stack application for retail traders to subscribe to daily trade suggestions (available on iOS)
- Implemented MCTS and kernelKNN on scraped public data with 94% accuracy in predicting financial market indicators

**FriendsBook (Cloud-based mini-Facebook)** | NodeJS, HTML, JavaScript

March 2023 – May 2023

- Fully functional social media platform with messenger, group chat, friend search and request, account creation, posts, comments, friend graph visualizer, profiles, and encrypted login. Deployed on Amazon EC2.

**PennOS (User Level UNIX-based Operating System)** | C

March 2023 – April 2023

- Implemented functional kernel, scheduler, FAT32 file system, and interactive shell

**PollPredict (Election analytics software)** | Python, SQL

January 2022 – present

- Conducting undergraduate research for predicting Indian election outcomes using the Adaptive Boosting algorithm.
- Reduced inter-strata error by 32% with fairness analysis. Presented to Indian political party members (BJP).

## Academic & Work Experience

### University Of Pennsylvania

Teaching Assistant

Philadelphia, PA

Aug 2022 – present

- CIT 5950 (Computer Operating Systems - Autograders Team) - Fall 2023
- PHYS 0150 (Principles I: Classical Mechanics) - Fall 2023
- CIS 2400 + CIT 5930 (Intro Computer Architecture) - Fall 2022, Spring 2023, Summer 2023

### Aventior Digital

Software Engineering Intern

San Francisco, CA

June 2023 – Aug 2023

- Tuned, optimized, and integrated various predictive features in databases for financial analytic systems.
- Developed scripts to detect data breaches and privacy compliance. Used C#, Python, SQL.

### XPRIIZE Foundation

Student Computer Engineer

San Jose, CA

May 2019 – July 2020

- Programmed AUV robot using the MOOS-IvP framework for path detection and iridium tracking coverage
- Team received \$1M award from the NOAA (Department of Commerce) for best chemical detection software

### Intrinsyx Technologies

Engineering Student Intern

NASA Ames, Mountain View, CA

June 2018 – Aug 2018

- Researched and tested nano-biosensors to detect pathogens in  $\mu$ -gravity. Supervised by Dr. John Freeman.
- Co-authored grant proposals to acquire NIH and government funding.

## Additional Information

**Research :** Penn Perelman School of Medicine - FAERS Drug Adherence Project (PI: Li Shen), Main Contributor - Photochemical Effects of an MFC (Presented at ASGSR Research Conference)

**Affiliations/Leadership :** University Scholars Research Program, Wharton Investment and Trading Group, Wharton Intl. Business Review (Head of Outreach), Penn Poker Club (President),  $\Delta$ KE (Philanthropy Chair)

**Interests:** Hackathons (Winner), Chess, Poker, Tennis, Surfing, Tabla (Indian Percussion), Hindi/Urdu Poetry