

Vikram Oddiraju

voddira@purdue.edu | (765)-667-3442 | linkedin.com/in/vikram-oddiraju | github.com/Vekram1

EDUCATION

Purdue University
BS in Computer Science

Minors: Economics & Mathematics

West Lafayette, IN | **August 2021 - May 2025**

GPA: 3.41 / 4.00

Relevant Coursework:

Operating Systems, Computer Networks, Systems Programming, Programming in C, Introduction to the Analysis of Algorithms, Data Mining & Machine Learning, Linear Algebra, Probability

Languages/Tools/Platforms:

C, C++, 32-bit x86 Assembly, Java, Python, Bash, ReactJS, Firebase, Spring Boot, GDB, Git, Docker Networking

Technical Skills:

Kernel Programming/ABI, Software Development, Data Analysis, Web APIs/API Testing

PERSONAL PROJECTS/CLUBS

Reinforcement Learning based Mean-Variance Portfolio Optimization Solver

July 2025 - Current

- **Outperforms** non-PPO based **FGMRES** which uses fixed block size preconditioners
- Building a **PPO RL agent** to solve $Ax=b$ (A is a correlation matrix of asset returns) using an iterative solver, FGMRES, with dynamically sized diagonal block preconditioning
- Utilizing **Stable Baseline 3**'s library for creation of custom environment, agent learning, and evaluation

QR Decomposition vs. Gradient Descent Linear Regression Evaluation

December 2024

- C++ based evaluation of Gram-Schmidt **QR decomposition vs. gradient descent** for solving linear regression
- Tested on Boston Housing dataset (distance to Boston employment centers vs. median value of homes)
- From my testing, QR decomposition ran 84 times faster than gradient descent, which utilized a learning rate 0.01

Purdue Space Program (PSP) | Member of Command & Data Handling Team

January 2023 – December 2023

- Researched effective ways to transmit and receive telemetry data between a ground station and a CubeSat
- Wrote a report on the I2C data bus to use for internal data communication within the CubeSat that works with our proposed OS for the onboard computer
- Developed familiarity with the network layer CubeSat Space Protocol (CSP) for networking requirements

AdvertAid

June 2023 – May 2024

- Independently developed an employment-focused social media web app connecting online content creators and enterprises to facilitate brand partnerships
- Responsible for the entire design process, backend, security, authentication, and front-end development
- Utilized Figma for design and planning for different display sizes
- Google's firebase APIs for authentication, database storage, and file CRUD

Cross Cultural Association | Board Member (Marketing)

January 2025 – May 2025

- Charged with creating social media content that supports the activity of the association
- Connected with other cultural clubs' boards to coordinate events

WORK EXPERIENCE

Volante Technologies | Software Development Intern

June 2022 – August 2022

- Collaborated with a software team to build a SaaS product, QuickConnect
- Worked on tokenization aspect of the product for secure monetary transactions between banks and counterparties
- Developed RESTful API endpoints with the help of Spring Boot for a web app that would securely generate and store tokens in a SQL database
- Created a program to generate unique 4-5 character short names using RegEx for bank names used in tokenization

Old National Bank-1834 | Equity Research Intern (Wealth Management)

June 2024 – August 2024

- Developed a custom screener in Python using a combination of Bloomberg API and SEC filings data for use within a portfolio strategy (utilized Huber regression on ROIC – WACC relative to EV/IC)
- Covered companies within the analog & mixed signal semiconductor industry - MCHP, ADI, TXN, STM, QRVO, SWKS, and MTSI (\$5 billion plus MC for research within Core Portfolio Strategy)
- Contributed to weekly meetings involving macroeconomic, industry, and specific equities' outlooks with ER team