Kalyan **Maddineni**

Software Engineer

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Education

University of Massachusetts Amherst *Amherst, MA*

B.S. in Computer Science and Statistics *Sept 2018 - Present*

- Cumulative GPA: 3.6 | Expected Graduation: December 2021

Relevant Coursework

Computer Science Data Structures, Algorithms, Web Programming, Computer Vision, Computer Networks, Databases

Mathematics Discrete Math, Advanced Linear Algebra, Statistics I/II, Regression Analysis

Other Game Theory, Econometrics

Relevant Skills

Languages Python, Java, C/C++, JavaScript, HTML/CSS

Frameworks NodeJS, ReactJS

Databases SQL(PostgreSQL, MySQL), NoSQL(MongoDB), AWS

Other NGinX, Docker

Work Experience

Fidelity Investments *Merrimack, NH*

Software Engineering Intern *May 2021 - August 2021*

- Developed a password encryption tool for RESTful API Authentication
- Created and Validated a RESTful API to optimize grant file approvals

UMass Amherst Isenberg School of Management *Amherst, MA*

Financial Modeling & Research Intern *September 2020 - December 2020*

- Designed and developed a website for real-time index tracking
- Developed a trading strategy that utilizes factors that impact profitability of a trade (eg. size of trade, risk management, etc) to run alongside a human in decision making as a computer assistant

Fidelity Investments *Merrimack, NH*

Quantitative Development Intern *May 2020 - August 2020*

- Developed an operational monitoring tool using SQL and Tableau for bonds, securities, and index data
- Created a visualization tool for monitoring app usage, query calls, query/database degradation, and query variance
- Optimized a database via hashing and indexing

EventVestor *Princeton, MA*

Research Intern *May 2019 – July 2019*

- Researched competitors that utilized web crawling and data collection for stock signal generation
- Detailed intrinsic faults in competitor's products and models
- Created a stock prediction model in python using time series and stock price data for companies in the S&P 500

Projects

Panoramic Image Stitching *April 2021 – May 2021*

Python

- Detects corners, Extracts features, and Matches features in each image
- Uses RANSAC to transform, scale, and stich the two images together

Black-Scholes Option Pricing Model *August 2020 – December 2020*

C/C++ & Python

- Option Pricing Calculator and Geometric Brownian Motion Simulator based on the Black-Scholes formula
- Can calculate Implied Volatility (IV) and Greeks