




# Cole Rottenberg

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## PROFESSIONAL SUMMARY

Senior in college majoring in Computer Engineering, showcasing a fervent interest in systematic trading. Proficient programming skills, with proven track record in project management. Actively engaged in clubs and organizations to cultivate both hard and soft skills essential to the industry. Eager to leverage academic excellence and hands on experience in a dynamic and innovative professional setting.

## EDUCATION

### University of Florida

*Bachelor of Science in Computer Engineering*

December 2024

*Current GPA: 3.52/4.0*

### Lake Highland Preparatory School

June 2020

*GPA: 4.3/4.0*

## SKILLS

**Languages:** C/C++, Python, L<sup>A</sup>T<sub>E</sub>X, SQL, Go, Rust

**Libraries:** Pandas, NumPy, Matplotlib, FreeRTOS, ESP-IDF

## TECHNICAL PROJECTS

### Real-time IMU Data Streaming via DMA & UART | *C, C++, ASM*

May 2023

- Enable low latency access to IMU data through DMA coprocessor freeing CPU
- Ran CPU in sync with software enabled DMA transfers
- Redesigned data transfers architecture allowing an order of magnitude increase in speed
- Pipelined IMU data over high-speed UART stream via hardware interrupts

### Multi-Trend Following Strategy | *Python, NumPy, Pandas, Matplotlib*

October 2023

- Developed a strategy in Python, leveraging libraries such as Pandas for data manipulation and NumPy for numerical computations. Implemented algorithmic trading models to identify and follow profitable trends.
- Enhanced the original model by integrating advanced statistical methods for more accurate trend prediction and risk management.
- Worked closely with front-end developers to ensure seamless data integration and back-end project management matched front-end.
- Published to GitHub

## EXPERIENCE

### AlgoGators | *Assistant Portfolio Manager*

August 2023 – Present

- Developed and deployed a comprehensive Python-based application for divergent strategies, integrating SQL server for futures data retrieval across 100+ instruments. Implemented advanced analytics using exponentially weighted moving averages to generate trading signals, and designed dynamic optimization algorithms for capital-efficient position management.
- Successfully automated signal generation using cron and played a key role in system deployment on a remote server, enhancing operational efficiency and decision-making in trading strategies.

### Florida Cryptocurrency and Alternative Assets Club | *Treasurer*

Jan. 2022 – Dec. 2023

- Lead topic discussions on the cutting edge applications and research within blockchain research
- Host guest speakers from the industry

### Blue Vigil | *Intern*

June 2023 – August 2023

- Developed communication protocols for data transfer over RS-485 in electrically noisy environments. Implemented Reed Solomon Error-correction code alleviating communication faults due to corruption.
- Built fault warning systems within commercial drone lighting system on ESP-32s