Yeon Lee

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Education

Georgia Institute of Technology — Atlanta, Georgia

B.Sc. in Computer Science; ***GPA: 3.78/4.00*** — *Aug 2021 – Present*

Threads in Intelligence and Devices

Relevant coursework: Object Oriented Programming, Data Structures and Algorithms, Objects and Design, Computer Organization & Program, Systems and Networks, Computer Networking I, Design & Analysis of Algorithms, Intro to Artificial Intelligence, Digital Design Lab, Prototyping Intelligent Devices, Automata and Complexity, Computer Vision, Game AI, Combinatorics

Skills

Languages: Python, Java, C/C++, HTML/CSS, Javascript, SQL, Swift, MATLAB, Bash, Go, GraphQL

Technologies: Flask, Django, Node.js, React.js, MySQL, MongoDB, NoSQL, Git, Docker, AWS, PyTorch, TensorFlow, Linux, Kali Linux, Apache, REST API

Methodologies: Agile, Scrum, OOP, Functional Programming, CI/CD, TDD

Experience

LymphaTech — Atlanta, Georgia

Backend Developer — *Aug 2023 – May 2024, Contract*

- Developed a two-way communication system between the frontend and backend components of the application by integrating two types of communication into one using a single MongoDB database, implementing a flag system to utilize resources more efficiently.
- Achieved a maximum of 3% difference in distance values from the ground truth by utilizing computer vision principles and Python's Open3D point cloud library to generate contour points between two landmarks, ensuring precise measurements.
- Enhanced data communication from the database to the backend using GraphQL, enabling efficient retrieval of specific patient data for more precise analysis.
- Fine-tuned the parameters using PyTorch to balance the values of integrated distances between contour points and ground truth, ensuring high accuracy and reliability in measurements.

College of Computing, Georgia Institute of Technology — Atlanta, Georgia

Undergraduate Teaching Assistant — *May 2022 – May 2023, Internship*

- Evaluated students' understanding of fundamental data structures and algorithms through assessments, feedback, and guidance during recitation sessions and office hours.
- Contributed to the development of a scalable cheat detection assistance application to maintain academic integrity.

Awards & Achievements

Faculty Honors Letters: Awarded to degree-seeking undergraduate who during the preceding term made an academic average of 4.00 at the Georgia Institute of Technology. (Spring 2022, Fall 2023)

1st/34 in Fall 2023 CS 3651 Robotics Showcase: Awarded to the team who placed in the CS 3651 robotics showcase based on criteria of creativity, complexity, and implementation. (Aug 2023 – Dec 2023)

25th/253 in 2019 Georgia Tech High School Math Day Proof Exam: Prerequsite for the competition was to place in the top 20% in the competitive exam. Award was given to students who placed in the top 5 of the proof exam with further placements being notified to individual schools after High School Math Day (April 2019)

Projects

Lumibot Mean Reversion & Momentum Trading Bot | *GitHub*

- A Python-based trading bot that uses technical metrics and historical data to identify trends, employing a decision-making algorithm balancing mean reversion and momentum trading techniques. Hosted on Render for automatic server reboots upon commits, it focuses on the top 20 NASDAQ 100 securities by market cap. Backtesting over 14 years showed an average annual return of 45.5%, outperforming the S&P 500, with a Sharpe ratio of 1.0, Sortino ratio of 1.6, and RoMaD of 0.88.

Posted Notes | *GitHub*

- An ethical note-sharing platform that facilitates the legal exchange of student notes with the permission of instructors. It allows students to sell their notes online while ensuring that instructors control the content shared within their courses. The platform encourages good note-taking and helps students prepare for courses before the semester starts. Built with JavaScript, HTML, and CSS on the frontend, Python on the backend, and MongoDB for the database, it offers a secure and user-friendly experience.

Big Dog | *GitHub*

- An innovative robot designed for cost-effective and efficient luggage transportation. Utilizing a Raspberry Pi and a two-camera model, it employs computer vision to identify objects and navigate using hand movements. The robot's control system is based on Arduino, with a wireless remote controller as a backup. This project won 1st place at the CS 3651 robotics showcase by demonstrating its basic functionality smoothly.