Xi (Sophia) Chen

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Education

Georgia Institute of Technology August 2021 – Spring 2025 (Expected)
Candidate for Bachelor of Science in Computer Science
Candidate for Bachelor of Science in Mathematics Overall GPA: 3.73

Experience/Leadership

Research Assistant
Georgia Institute of Technology | Atlanta, GA |January 2023 - Current
- Led 3 human-machine interface projects, overseeing both management and full-stack development tasks.
- Conducting advanced machine learning analysis on ~4 million hacking detection datasets, working towards a publication.
- Implemented communication protocols between car servers using UDP in Unity, enhancing automotive tech integration.
- Partnered with other teams to integrate and refine HMI interface components.

Software Engineer Intern
Freetech Intelligent System | Shanghai, China |May 2023 – July 2023
- Enhanced data processing capabilities by designing and implementing robust data systems and algorithms within the R&D team.
- Created a simulation model that represents both static and dynamic environments in 7 layers, leading to patent application
- Innovated data processing by developing algorithms for efficient manipulation of raw database, resulting in patent application

Club Founder and 1st President
Math For Life Club, Our Lady of Good Counsel High School | Olney, Maryland |September 2018 – December 2021
- Pioneered the Math For Life Club, establishing its foundation and serving as its inaugural President.
- Continuously collaborate with the succeeding president to oversee club operations, ensuring ongoing success and engagement

Skills

Programming: Python, Java, Unity, C#, React, HTML, CSS, JavaScript, TypeScript, C, X86 Assembly, Swift, Kotlin, SQL
Methods: RESTful APIs, Flask, Ruby, Spring Boot, Node.js, PyTorch, TensorFlow, Pandas, GitHub, Firebase, MongoDB
Concepts: Data Structure & Algo, MVC architecture, Backend, OOP, Machine Learning, Agile, PM, Entrepreneurship

Projects

Travel bot AI Hotel Recommender
Hacklytics 2024 (Hackathon) | Atlanta, GA |February 2024
- Worked as a backend developer and project manager for integrating the APIs into the webpage application by using Flask server and training GPTs with millions of datasets in the backend by coding in Python
- Earned a promotion to the final round of the Hackathon, recognizing innovative AI solutions and technical prowess.

User Interface for Airline Database System Management
Independent Study Project assigned by Professor| Atlanta, GA |April 2023 – May 2023
- Engineered the backend integration, establishing connectivity between SQL database and a user web interface, culminating in a robust platform showcased in future classes.
- Employed a Java-based MVC architecture, utilizing DAO patterns and Spring Boot, to facilitate efficient data retrieval and insertion operations of SQL database management.

Warehouse Robot Automation
Individual Advanced Study Project | Atlanta, GA |December 2023
- Designed and implemented a Python-based robotic simulation that autonomously navigates and collects packages within a dynamically generated warehouse environment.

Machine Learning COVID Vaccination
In Class Final Project | Atlanta, GA |May 2022 – August 2022
- Constructed a predictive model to facilitate decision-making regarding vaccinations, enhancing public health initiatives.

K-means Clustering Research Paper
Research | Olney, Maryland + Atlanta, GA |July 2019 – May 2020
- Created algorithms for checking the validity of banknotes by K-means clustering in Python, guiding by a Georgia Tech Professor
- Published the paper in the International Journal of Computer Applications website

Awards

Dean's List – for undergraduate excellent academic performance
International Finalist – in both 23rd HiMCM and 21st HiMCM international math modeling competition
Honorable Mention – in 22nd HiMCM international math modeling competition
Sylva Serafino Mathematics Award – for distinction dedication and excellent performance in Math