

# Xi (Sophia) Chen

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## EDUCATION

### Georgia Institute of Technology

Aug 2021 – Expected 2025

*Bachelor of Science in Computer Science & Mathematics*

- **GPA:** 3.72 (Dean's List)
- **Selected Courses:** Object-Oriented Programming, Computer System and Network, Computer Organization and Programming, Algorithms (Honors Level), Database, Robotics Perception, Machine Learning, Computer Vision, Mobile Apps and Services

## PROFESSIONAL EXPERIENCE

### Hirebeat Inc. | Software Engineer Intern

Jul 2024 – Aug 2024 | New York City, NY

- Developed and maintained backend systems using Django, AWS, and Langgraph
- Implemented self-retrieving and logic flow functionalities in Langgraph to enhance LLM performance
- Collaborated with teams to integrate backend services within the frontend applications

### Georgia Tech - GooseCart | Co-Founders & Lead Software Developer

Feb 2024 – Present | Atlanta, GA

- Developed a cross-platform mobile app (Android and iOS) using React Native Expo for the front end and Python Flask for the back end, incorporated secure authentication and payment functionalities, and integrating Firebase through RESTful APIs
- Utilized Python Pandas and LangChain to train a virtual AI assistant, delivered custom user recommendations and interactions based on Google Maps API data
- Led development of a neighborhood collaborative app via Agile Sprints, contributed 70% of all code and project management.
- Achieved recognition with funding from Georgia Tech Create X and Incubator Awards from Johns Hopkins University

### Georgia Institute of Technology | Research Assistant & Full-stack Software Developer

January 2023 – Present | Atlanta, GA

#### Human-Machine Interface (HMI) Project:

- Engineered network protocols using UDP for real-time data transfer across 5 lab servers, facilitated stable connections for our simulated driving navigation system
- Developed a real-time ego vehicle navigation system in Unity and C# for driving simulations, implemented functions for dynamic coordinate adjustments and map construction based on vehicle data
- Created a real-time navigation map displaying positions and movements of vehicles within a simulated smart city system, successfully deployed in lab settings for ADAS testing

#### Machine Learning for Cybersecurity Project:

- Conducted advanced machine learning analysis on approximately 4 million datasets for hacking detection, achieved a model accuracy of 95% and progressing towards academic publication
- Utilized Python with PyTorch and TensorFlow for constructing Convolutional Neural Networks and adversarial data sampling

### Freotech Intelligent System | Software Engineer Intern

May 2023 – Jul 2023 | Shanghai, China

- Enhanced data processing systems and algorithms for backend operations and intelligent driving simulations
- Designed a multi-layered driving simulation in Python to automatically generate XML scripts in Open Drive and Open Scenario formats, encompassed static and dynamic environments
- Innovated raw data handling with Python and Pandas, optimized extraction techniques for geolocation and vehicle trajectories to support simulation development and system efficiency

## PROJECTS

### Hacklytics 2024 (Hackathon) | Travel bot AI Hotel Recommender

Feb 2024 | Atlanta, GA

- Led backend development and project management for integrating APIs into a web application using a Flask server and trained traversal and Gemini GPTs with million-scale datasets in Python
- Advanced to the final round of Hacklytics 2024, earned recognition for innovative AI recommendation capabilities

### Campus Discovery Web Application

Sep 2022 – Dec 2022 | Atlanta, GA

- Developed a React-based web application to manage campus events, facilitated distinct functionalities for users and managers
- Implemented Java-based MVC architecture with Spring Boot and DAO patterns, enabled robust connection and operations for the MySQL database to the frontend components
- Designed interactive features such as real-time event updates, event management (add/delete), and a central dashboard to improve user experience and operational efficiency

## SKILLS & INTERESTS

**Programming:** Python, Java, Unity, C#, React, HTML, CSS, JavaScript, TypeScript, C, X86 Assembly, Swift, Kotlin, SQL

**Methods:** RESTful APIs, Flask, Ruby, Spring Boot, PyTorch, Linear Programming, Pandas, GitHub, Firebase, MongoDB, MVC

**Awards:** International Finalist in HiMCM international math modeling competition, Sylva Serafino Mathematics Award