John Stone Zhang

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EDUCATION

Georgia Institute of Technology, College of Computing — May 2025
Bachelor of Science in Computer Science, Fintech Minor — GPA: 3.86
Coursework: Software Development Practices, Data Structures, Algorithms, Computer Hardware, Software Design Patterns, Artificial Intelligence, Database Systems, Machine Learning, Object Oriented Programming, Computer Vision

TECHNICAL SKILLS

Languages: Java, JavaScript, C#, C, C++, Python, SQL, LaTeX
Build Tools: Maven, Gradle
Version Control Tools: Git
Database: MySQL
Software: Unity, Jupyter Notebook, Emacs, Android Studio, Docker, Ghidra
Machine Learning: Regression, Decision Trees, Random Forests, Principal Component Analysis, Gaussian Mixture Models (GMM), Convolutional Neural Networks (CNN), Hidden Markov Models
Cloud Computing: Azure, GCP

ACADEMIC PROJECTS

VGDev (Aug 2022 - Oct 2022)
- Designed and implemented game items and game levels in **Unity** for a first person shooter

Flight Database (Jan 2023 - Mar 2023)
- Constructed a **schema** for an airplane database in **MySQL** and **created a GUI with JavaFX**

Android Studio Mobile Game (Jan 2023 - April 2023)
- **Developed a Frogger adjacent mobile game** in Android Studio using Java and with **AGILE principles**
- Wrote **Junit tests** utilizing Mockito and exercised good practice software design patterns

Vertically Integrated Projects: Embedded Systems eCTF Competition and CSAW (Jan 2023 - April 2023, Aug 2023 - Nov 2023, Jan 2024 - April 2024)
- **Built Docker images** of car/key-fob pairs and **secured a design** for a hypothetical medical device in C
- **Analyzed side channel attacks** on cyber-physical systems and extracted capture flags from an Arduino

Park GT (Feb 2024 - April 2024)
- Worked in a team to create a **web application in Java and Javascript** that **tracks user geolocation data** and provides parking availability information for Georgia Tech Parking lots derived from user tracking information

Camera Calibration and Fundamental Matrix Estimation (Mar 2024)
- Used **RANSAC** to **estimate the fundamental matrix** and stitch images into a panorama in Python

Semantic Segmentation (Mar 2024)
- Constructed a **deep neural network** with **Pytorch** to perform **image segmentation** by **fine tuning ResNet-50** and utilizing **data augmentation** techniques, **Pyramid Pooling**, and **auxiliary loss**.

P2P File Sharer (April 2024)
- Implemented a rudimentary **P2P file sharing** software from scratch in Python

ARC-PRIZE (Sep 2024 - Nov 2024)
- Designed and implemented a solution to the **ARC-AGI benchmark** by utilizing a **Domain System Language**

Certifications

Azure AI Fundamentals Certification — Summer 2024

Honors and Awards

Zell Miller Scholarship (Full tuition) — Fall 2021-Spring 2024
Morehead Honors College (Top 5% of student body) — Fall 2021-Spring 2022
Baldwin Scholarship recipient — Fall 2021-Spring 2022