

Tyler Kwok

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EDUCATION

Georgia Institute of Technology

Integrated Bachelor's and Master's of Science in Computer Science

December 2025

GPA: 4.00/4.00

EXPERIENCE

Amazon

Software Engineering Intern

May 2023 – August 2023

Seattle, WA

- Architected data pipelines in Java to improve the data capacity of every Amazon Fresh fulfillment center by **25%**
- Built AWS Lambda-based proxies to implement dataset caching in S3, allowing for **instant** product status retrieval
- Engineered alarms for stale datasets to ensure up-to-date order calculations for **18%** of total fulfillment center data
- Coded system using Spring for backend, S3 and DynamoDB for storage, and Google Guice for dependency injection

NASA Kennedy Space Center

Software Engineering Intern

August 2022 – December 2022

Cape Canaveral, FL

- Developed command and control launch systems for Artemis moon lander program on Data Service team
- Improved data reliability by fixing errors in launch control data service to increase decimal precision by **114%**
- Created C++ test suite with **50+** mock unit tests, enabling the restructuring of launch control codebase

Georgia Tech Research Institute

Software Engineering Intern

May 2022 – August 2022

Atlanta, GA

- Pioneered A10 aircraft data labeling tool in Python with capacity of **400 images/minute** to detect emergencies
- Optimized data generation system reducing memory usage by **87.5%** while maintaining fidelity of synthetic data
- Utilized Docker, Pachyderm, and Kubernetes to create an active learning pipeline to detect aircraft damage
- Restructured pipeline using Kubeflow as a cost-free alternative to Pachyderm saving **\$5,000** per license

Contextual Computing Group

Undergraduate Researcher

November 2021 - Present

Atlanta, GA

- Lead developer for a C++ graphics application emulating group captioning used for **3 separate** HWD user studies
- Spearheaded development of open-source emulated captioning research platform with Unity and MongoDB
- Led investigation on the optimal field of view for daily captioning on HWD accepted for conference **publication**

PROJECTS

PopSign AI | *Python, PyQt, Docker, Firebase*

January 2023 - Present

- Founder of distributed system annotation engine for ASL recognition model which was featured at **Google IO**
- Curated process for annotating ASL database which was open-sourced as a Kaggle competition with **1165 teams**

MarketMatch | *React, FastAPI, Next.js, MongoDB, AWS*

January 2024 – February 2024

- Launched app that **gamifies portfolio building** for beginners by providing stocks based on adaptive swiping
- Handled matching with nearest neighbors, reduced latency by **80%** with MongoDB caching, deployed using AWS

Symmetry | *Python, FastAPI, React, MySQL*

November 2023 – January 2024

- Deployed group productivity dashboard using ChatGPT and LLAMA2 increasing student productivity by **12%**
- Leveraged Python FastAPI to develop REST APIs, Pinecone DB for chatbot integration, and React for front-end

eBay Package Date Delivery Predictor | *Python, Pandas, TensorFlow*

August 2021 – December 2021

- Placed **16th/60 teams** nationally in university challenge to predict package delivery dates using eBay dataset
- Visualized and cleaned data using techniques such as PCA reducing 15 million entry dataset by **40%**

TECHNICAL SKILLS

Languages: Java, Python, Kotlin, C, C++, C#, R, SQL

Technologies: Spring, Mockito, React, OpenGL, Docker, AWS (S3, CloudWatch, Lambda, EC2), Postman, TensorFlow, PyGame, Unity, Linux, Flask, FastAPI, MongoDB

Concepts: Machine Learning, Computer Vision, Scalable Containerization, Cloud Computing, Human Computer Interaction, Virtual/Augmented Reality, Data Pipelining, MLOps, Computer Simulations