SAMUEL YUAN

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EDUCATION

The University of Texas at Austin   B.S. Honors Computer Science, BBA Canfield Business Honors   May 2025
Overall GPA: 3.86/4.0

EXPERIENCE

Roblox – *Software Engineering Intern;* San Mateo, CA   May 2023 – August 2023
- Deployed gRPC endpoint on .NET service to efficiently store and serve over 500M searches from 150M users in CockroachDB
- Researched chi-squared algorithm to detect trending searches from over 40M daily searches stored in data warehouse
- Implemented system to generate and store trending search candidates daily using Spark and Hive deployed on Airflow
- Migrated services from workstation to server garbage collection to decrease memory usage by ~5% and stabilize CPU use

Striveworks – *Software Engineering Intern;* Austin, TX   May 2022 – August 2022
- Constructed Golang microservice to analyze and report product dependencies, deployed on Kubernetes cluster with Helm
- Designed Kubernetes-in-Docker cluster to deploy local instance of microservice for testing, mocked out various features
- Wrote Python unit tests interfacing with various platform ML SDK functions and Amazon S3 using Pytest and Pandas libraries
- Created CI/CD pipeline jobs to pull in-development Docker images from private registry and test before deployment

Otto – *Founding Engineer;* Remote   July 2020 – January 2022
Pet management startup integrating software with QR code pet tag to centralize pet data and improve pet safety
- Developed cross-platform mobile app with 600+ downloads and average rating of 4.4 stars using Flutter and GraphQL
- Architected efficient NoSQL structure for storing and retrieving user and pet data on Firebase cloud database

PROJECTS

PicTag – *Founding Engineer*   Dec 2021 – Present
- Built Flutter mobile and web user interfaces to enable AI-powered search for relevant images using CLIP model
- Engineered Golang API to create image vector embeddings from S3 bucket using AWS Lambda and SQS, stored in vector DB

ParaFLAI – *Lead Developer*   May 2023
- Assembled PyTorch federated learning system to boost training speed and data privacy compared to traditional ML models
- Applied cloud compute VMs and GPUs to concurrently train classification model across network of decentralized devices

CapsuleMap – *Lead Developer*   April 2021
- Programmed cross-platform social media app focused on physical and mental health with Flutter, Provider, MobX, Firebase
- Integrated Google Maps SDK and Geolocation API to display current user location and database entries created nearby
- Awarded $11,000 in claimable funding by the 1517 Fund to further develop application

VS Code GitHub Projects – *Full Stack Developer*   February 2021
- Released open-source VS Code extension providing interface for GitHub Projects with 13,000+ total downloads
- Established persistent GraphQL communication by polling between multiple WebViews rendered by Svelte and GitHub API

LEADERSHIP EXPERIENCE AND ACTIVITIES

Undergraduate Computational Finance – *Member*   Spring 2022 - Present
- Craft market watches with insight into daily news and carefully researched stock pitches and analyses
- Developed trading simulation with React, Socket.io, and Node.js to simulate creating a market around a given value

Honors Business Association – *Vice President of External Affairs (Fall 2022)*   Fall 2021 – Spring 2023
- Led team of 3 to organize various philanthropic events involving 30+ members to serve the local community
- Organized food drive with honors program office collecting 25+ canned goods donated to the Central Texas Food Bank

HACK Initiative – *Co-Founder, Volunteer*   Spring 2019 - Spring 2021
- Launched volunteer program at two nearby junior high schools to teach coding to younger students
- Guided 50+ students in learning programming languages such as Java and JavaScript using interactive libraries such as p5.js

HONORS
- First Place at UT Computer Science Honors CritterFest AI Competition   October 2021
- Second Place Project and Most Novel Hack at Citrus Hack Hackathon   April 2021

ADDITIONAL INFORMATION

Programming Languages: Go, Python, Java, JavaScript, TypeScript, Dart, C, C#, Rust, CUDA, SQL
Frameworks and Platforms: Docker, Kubernetes, Spark, Hive, Airflow, GraphQL, Node.js, .NET, React, Swagger, Pandas