

Siyuan (Shawn) Chen

949-616-0817 | sc2489@cornell.edu | linkedin.com/in/shawn-siyuanchen/ | github.com/sc103121 | sc103121-portfolio-delta.vercel.app

EDUCATION

Cornell University, College of Engineering

Ithaca, NY

Masters of Engineering in Computer Science

Aug 2024 - May 2025

Bachelor of Science in Computer Science

Aug 2020 - May 2024

TECHNICAL SKILLS

Languages: Python, Java, Javascript, Typescript, OCaml, C/C++, SQL(MySQL, PostgreSQL), HTML, CSS, Swift

Frameworks: Next.js, Express.js, ReactJS, React Native, Spring, Spring Boot, Hibernate, Tailwind CSS, Flask, JUnit

Developer Tools: Git, Docker, Google Cloud, AWS, Firebase, Postman, Thunder Client, Vercel, Expo, Heroku, XCode, GDB

Libraries: Ant, NumPy, OpenCV, PyTorch, Tensorflow, Keras, Transformers, NLTK, Matplotlib, Pandas, Yolo, PIL, Sqlite3

WORK EXPERIENCE

Cornell University Ann S. Bowers College of Computing and Information Science Jan 2023 – Present

Computer Science Teaching Assistant

Ithaca, NY

- Lectured concepts in **functional programming**, **data structures**, **systems programming** and **computer vision** to over 60 students in recitations
- Mentored and provided feedback to 10 student groups in semester-long **OCaml functional programming** projects
- Assisted over 20 students in **C** and **Logisim** assignments to understand computer engineering and systems organization
- Graded 100 students homework and exams enrolled in courses

PROJECTS

Hungry? | *Rest API, AWS, Java, Spring, Spring Boot, Docker, Hibernate, ReactJS, Ant, PostgreSQL* Dec 2023 – Present

- Spearheaded a full-stack online food ordering web app with client side interface implemented by **ReactJS** and **Ant Design** and server side supported by a **PostgreSQL** database hosted on **AWS RDS**
- Developed **CRUD REST APIs** using **Spring** to support registration, authentication, menu searching and ordering
- Leveraged **Spring Data JDBC repository** to fetch and update data from **PostgreSQL** database and display on web client
- Utilized **Spring Security** to handle session-based user registration and authentication
- Employed **separation of concerns** and **dependency injection** to maintain distinct controller, service and repository modules for increased cohesion and reduced coupling

VideoHost | *TypeScript, Google Cloud, Firebase, Docker, Next.js, Express.js, FFmpeg* Nov 2023 – Present

- Spearheaded a **full-stack web app** using **Firebase Functions** to serve a **REST API** and **Next.js** as frontend
- Implemented real-time video processing service using **Cloud Pub/Sub** with a request timeout of 10 minutes, with a **NoSQL** database to host raw and processed videos on **Cloud Storage**
- Utilized **Firebase Auth** to handle user authentications and hosted web client on **Cloud Run**
- Published processed videos on web client through fetching metadata from **Cloud Firestore**

JobBoard | *React Native, Javascript, Expo* Sep 2023 – Nov 2023

- Architected a **mobile app** deployed on **Expo** platform aiming to display relevant career opportunities to users
- Created custom API data fetching hooks to fetch and integrate data from an external API
- Implemented search and pagination functionality using **React Native** development

Farmfield Monitor | *AWS, Rest API, Python, Boto3 SDK, Git, Tensorflow, OpenCV* May 2022 – Aug 2023

- Utilized **REST API** for smart farmfield monitor prototypes of an agricultural startup to make them upload and fetch field data on insect types, temperature and humidity and location coordinates onto **AWS** cloud server
- Built a **CNN neural network** using **Tensorflow** to identify 20 common pest types and quantities with 95% accuracy
- Developed **OpenCV** real-time motion detection mechanisms to detect insect movements at 30 FPS
- Created an automated **Python** script with **Boto3 SDK** to fetch and update **JSON** data from 50+ devices via **AWS API**

ShowTracker | *Swift, Python, Flask, Heroku, XCode* Sep 2021 – Dec 2021

- Designed an **iOS App** in **Swift** that tracks TV show preferences and watchlists specific to each user ID
- Architected frontend multi-layer GUI to display interactive and responsive show watchlist, with Python's backend **Flask** Framework hosted on **Heroku**
- Won **Honorable Mentions** in Cornell Winter 2021 Hackathon