

KEVIN CHEN (YI-CHIA CHEN)

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EDUCATION

Georgia Institute of Technology

Master of Science in Computer Science | GPA 3.5

Aug 2021 – May 2023

Atlanta, GA

National Cheng Kung University

Bachelor of Science in Computer Science | GPA 3.5

Sep 2015 – Jun 2020

Tainan, Taiwan

Courses: Machine Learning, Digital System(FPGA), Computer Architecture(Verilog), Info Security(GDB), Programming Language

EXPERIENCE

AeroTract, LLC

Software Engineer Intern

Sep 2023 – Present

Albany, OR

- Developed a web app from scratch, saving engineers 300+ hours yearly by designing UIs for fine-tuning machine learning configurations using **TypeScript** and **React**. Implemented **REST APIs** and SDKs using **Python Flask**.
- Debugged and fixed long-existing frontend issues of an internal dashboard using **React** and Bootstrap.

Georgia Institute of Technology

Graduate Research Assistant

Aug 2022 – Dec 2022

Atlanta, GA

- Achieved SPMD parallel execution using **C++** parallel computing model **HCLib**, **OpenSHMEM** and **MPI**, reducing runtime by over 50%. Researched the concurrency model **Actor model** for distributed asynchronous computations.
- Conducted experiments on HCLib-Actor programs and documented the behaviors of their parallel primitives.

Academia Sinica

Research Intern

Jul 2020 – Dec 2020

Taipei, Taiwan

- Constructed context-free parser using Brzozowski's derivative and **functional programming** with **Haskell**.
- Programmed a course website for the instructor to deliver materials to 100+ undergrads with **Haskell**.
- Performed formal verification using type systems with interactive proof assistant **Agda**.

PIXNET Digital Media Corporation

Data Analyst Intern

Aug 2019 – Dec 2019

Taipei, Taiwan

- Created dashboards to uncover marketing insights with **BigQuery**, **Data Studio**, **Python**, **R**, and **D3.js**.
- Automated the data import process from Google Sheets to **BigQuery** using **Matillion ETL** and **Python**.
- Proposed new website layouts to improve user experience and ad revenue by analyzing clickthrough rate.

PROJECTS

“Words” – Flashcard Maker 🍏🍏 | iOS Development, Spring Boot, Object-Oriented Programming

Sep 2023 – Oct 2023

- Designed native iOS app that turns word definitions into flashcards using **Swift**, **SwiftUI** and **MVVM** architecture.
- Created a **Java Spring Boot** backend following OOP principles, including developing **REST APIs** to service iOS and web client, and using **JPA** and **Hibernate** to query data from **Postgres**.
- Engineered a secure login service, authentication and authorization using **Bcrypt**, **JWT** and Spring Security Filter.

“Mini Reddit” – Content Rating System 🍏🍏 | Next.js, React, GraphQL, Server-Side Rendering

May 2023 – Jun 2023

- Developed a **Node Express** server with **Apollo GraphQL** middleware using **TypeScript**, backed by **Redis** and **Postgres**.
- Implemented the **GraphQL** schema and resolvers using **TypeGraphQL** and **TypeScript**.
- Built a server-side rendered **React** web client in **Next.js** and **TypeScript**.

“Simple Bank” – Banking Service System 🍏 | Golang, AWS, gRPC, Microservices

Apr 2023 – May 2023

- Built a CI/CD pipeline to automatically run unit tests written in **Golang**, deploy the service to **Kubernetes** clusters on **AWS EKS**, and establish a production database on **AWS RDS**.
- Launched **Golang Gin** backend with **REST APIs** and backed by **Postgres**, and used **PASETO** for authentication.
- Augmented the **Golang** backend with **gRPC** and **gRPC Gateway** using **Protocol Buffers**.

“I Love Mining” – A Puzzle Solver 🍏 | C++ Multi-Threading

Mar 2022 – Apr 2022

- Implemented ABI encoding of 256-bit unsigned integers using **Boost** and performed coin mining on an Ethereum smart contract using **C++ multi-threading**.

“THE ONE” – Book Recommendation System 🍏 | Machine Learning, NLP, Python, D3.js

Oct 2021 – Dec 2021

- Developed a book recommender system by creating NLP models using **Python**, **sklearn**, **pandas** and **NLTK**.
- Launched a website that gets responses from **Python Flask** backend through **AJAX** requests using **jQuery** and **JavaScript**.
- Designed frontend with interactive visualization using **D3.js** and **JavaScript** to display popular books.

SKILLS

Languages: C++, C, Python, Go, Verilog, Java, JavaScript, TypeScript

Technologies: Linux, MPI, OpenSHMEM, OpenMP, CMake, Boost, Docker, Kubernetes, Git, GitHub Actions CI

Fullstack: Gin, Flask, Spring Boot, Hibernate, Node, Express, React, Next.js, REST API, GraphQL, gRPC

Cloud/DB: Postgres, MySQL, MongoDB, Redis, AWS (EC2, RDS, EKS) (AWS Certified Solutions Architect Associate)