KEVIN CHEN (YI-CHIA CHEN)

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SKILLS

Languages: C++, C, C#, Java, JavaScript, TypeScript, Python, Go
DevOps: Linux, CMake, Boost, STL, GDB, Postman, 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)

EDUCATION

Georgia Institute of Technology   *Aug 2021 – May 2023*
Master of Science in Computer Science | GPA 3.5   *Atlanta, GA*
- **Coursework:** Machine Learning, Data Analytics, Blockchain, Networks, Info Security, Mobile Applications, Database

National Cheng Kung University   *Sep 2015 – Jun 2020*
Bachelor of Science in Computer Science | GPA 3.5   *Tainan, Taiwan*
- **Coursework:** Object Oriented Programming, Computer Architecture, Operating Systems, Data Structures, Algorithms

EXPERIENCE

AeroTract, LLC   *Sep 2023 – Present*
Software Engineer Intern   *Albany, OR*
- Developing a web application for adjusting configurations to train machine learning models using **TypeScript** and **React**.
- Implementing APIs and SDKs in the backend using **Python Flask**, and integrating the web client with it.

Georgia Institute of Technology   *Aug 2022 – Dec 2022*
Graduate Research Assistant   *Atlanta, GA*
- Achieved parallelism in **C++** by using the parallel computing model **HClib** following OOP principles.
- 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   *Jul 2020 – Dec 2020*
Research Intern   *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   *Aug 2019 – Dec 2019*
Data Analyst Intern   *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 │ *Spring Boot, Hibernate, JUnit, Object Oriented Programming* [github] [github]   *Sep 2023 – Oct 2023*
- Created a **Java Spring Boot** backend following **Object Oriented** design patterns, including implementing **REST APIs** to service a **Next.js** web client that turns word definitions into flashcards, and using **Hibernate** to query data from **Postgres**.
- Implemented a secure login service, authentication and authorization using **Bcrypt**, **JWT** and Spring Security Filter.

"Mini Reddit" – Content Rating System │ *Next.js, React, TypeScript, GraphQL* [github] [github]   *May 2023 – Jun 2023*
- Developed a **Node Express** server with **Apollo GraphQL** middleware, backed by **Redis** and **Postgres**.
- Designed 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* [github]   *Apr 2023 – May 2023*
- Launched **Golang Gin** backend with **REST APIs** and backed by **Postgres**, and used **PASETO** for authentication.
- 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**.
- Augmented the **Golang** backend with **gRPC** and **gRPC Gateway** using **Protocol Buffers**.

"I Love Mining" – A Puzzle Solver │ *C++ Multi-Threading* [github]   *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* [github]   *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.