

# KEVIN CHEN (YI-CHIA CHEN)

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## SKILLS

**Programming:** C++, C, C#, Java, JavaScript, TypeScript, Python, Go  
**Hardware:** Verilog, FPGA, Digital Design, GDB, x86 Assembly  
**Fullstack:** Gin, Flask, Spring Boot, Hibernate, Node, Express, React, Next.js, REST API, GraphQL, gRPC  
**DevOps:** Linux/Unix, CMake, Docker, Kubernetes, Postman, GitHub Actions CI, JUnit  
**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 (GDB, x86 Assembly), Mobile App

**National Cheng Kung University** Sep 2015 – Jun 2020  
*Bachelor of Science in Computer Science | GPA 3.5* Tainan, Taiwan  
• **Coursework:** Computer Architecture (Verilog), Digital Logic Design (FPGA, Modelsim), Object Oriented Programming, Networks (Socket, TCP/IP, UDP, DNS), Operating Systems, Compiler, Data Structures, Algorithms

## EXPERIENCE

**AeroTract, LLC** Sep 2023 – Present  
*Software Engineer Intern* Albany, OR  
• Developed a web app from scratch for fine-tuning machine learning configurations using **TypeScript**, **React**.  
• Implemented backend APIs and SDKs using **Python Flask**, and made custom exception classes for error handling.

**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 **Object Oriented** design patterns.  
• 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 OOP principles, including implementing **REST APIs** to service a **Next.js** web client that turns word definitions into flashcards, and using **JPA** and **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  
• 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**.

**"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.