Yi-Chia "Kevin" Chen

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SKILLS

Programming:	C++, C, C#, Java, JavaScript, TypeScript, Python, Go
Hardware:	Verilog, FPGA, Digital Design, GDB, x86 Assembly
Fullstack:	.NET, Flask, Gin, Node, Express, React, Next.js, REST API, GraphQL
Cloud/DevOps:	Docker, Kubernetes, Postgres, MySQL, MongoDB, Redis, Git, AWS (EC2, RDS, EKS, SQS, SNS, etc.)
Certifications:	AWS Certified Solutions Architect Associate

EDUCATION

Georgia Institute of Technology
Master of Science in Computer Science,   GPA 3.5
Aug 2021 – May 2023
Atlanta, GA
- **Coursework:** Machine Learning, Data Analytics, Blockchain, Networks, Info Security (GDB, x86 Assembly), Mobile App, Database, Networks (BGP, RPKI, SDN)

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

WORK EXPERIENCE

Georgia Institute of Technology
Graduate Research Assistant
Aug 2022 – Dec 2022
Atlanta, GA
- Achieved parallelism in **C++** by utilizing the parallel computing model **HClib**.
- 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

"Mini Reddit" – Lightweight Content Rating System
Fullstack Web Application [github] [github]
May 2023 – Jun 2023
- Developed a **GraphQL** server using **Apollo Server** and **Express**, integrating it seamlessly with **Redis** and **Postgres**.
- Designed the **GraphQL** schema and resolvers using **TypeGraphQL** and **TypeScript**.
- Built a server-side rendered **React** web client in **Next.js**.

"Simple Bank" – Banking Service System Using Golang
Backend Web Application, Microservices [github]
Apr 2023 – May 2023
- Developed and launched **Go** backend with **REST APIs** using **Gin**, and used **JWT** for authentication.
- Ensured the functionality of APIs and CRUD operations on **Postgres** by using **Postman** and writing unit tests in **Go**.
- Deployed the service to **Kubernetes** clusters on **AWS EKS**, and established a production database on **AWS RDS**.

"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" – Interactive Book Recommendation System
Fullstack Web Application, Machine Learning [github]
Oct 2021 – Dec 2021
- Developed a book recommender system by creating NLP models using **Python**, **sklearn**, **pandas** and **NLTK**.
- Launched the website that retrieves data from **Flask** backend through **AJAX** requests using **jQuery**.

Air Quality Data Collection, Analysis, and Prediction from Scratch at NCKU
Data Analytics, Machine Learning [github] [github]
May 2019 – Sep 2019
- Won **3rd Place** in *2019 CSIE Department Research Project Competition*.
- Presented PM 2.5 forecasts with deviation < 28% by training machine learning models, including regression and time series analysis, with **Python** and **sklearn**.