Kevin Chen (Yi-Chia Chen)

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Skills

Programming: Python, Go, C++, C, C#, Java, JavaScript, TypeScript
Machine Learning: Keras, TensorFlow, PyTorch, sklearn, NumPy, NLTK, cv2
Fullstack: Flask, Gin, Spring Boot, Hibernate, 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 *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), Algorithms

National Cheng Kung University *Sep 2015 – Jun 2020*
Bachelor of Science in Computer Science, GPA 3.5 *Tainan, Taiwan*
- **Coursework:** Computer Architecture (Verilog), Digital Design (FPGA), Operating Systems, Compiler, Data Structures

Work Experience

Georgia Institute of Technology *Aug 2022 – Dec 2022*
Graduate Research Assistant *Atlanta, GA*
- Achieved parallelism in **C++** by using 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 *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

"Mini Reddit" – Lightweight Content Rating System *May 2023 – Jun 2023*
Fullstack Web Application [github] [github]
- 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 Using Golang *Apr 2023 – May 2023*
Backend Web Application, Microservices [github]
- Launched **Golang Gin** backend with **REST APIs** and backed by **Postgres**, and used **JWT** for authentication.
- Verified correctness of APIs and CRUD operations by writing unit tests in **Golang** and using **Postman**.
- Deployed the service to **Kubernetes** clusters on **AWS EKS**, and established a production database on **AWS RDS**.
- Augmented the **Golang** backend with **gRPC** and **gRPC Gateway** using **Protocol Buffers**.

"THE ONE" – Interactive Book Recommendation System *Oct 2021 – Dec 2021*
Fullstack Web Application, Machine Learning [github]
- 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.

Tagging of Thesis *Dec 2019 – Jan 2020*
Deep Learning, Natural Language Processing [github]
- Trained the dataset with Neural Network models, including **RoBERTa**, **XLNet**, **LSTM**, and **GRU**, and achieved **70%** F1-score on tags prediction task, using **PyTorch** and **Simple Transformers**.

Air Quality Data Collection, Analysis, and Prediction from Scratch at NCKU *May 2019 – Sep 2019*
Data Analytics, Machine Learning [github] [github]
- 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**.
- Collaborated in a team to containerize **MongoDB** and **Python Flask** server with **Docker** for data storage and retrieval.