# Yi-Chia "Kevin" Chen

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## Skills

**Data Engineering:** Databricks, MySQL, Tableau, Scala, BigQuery, Data Studio, Matillion ETL, D3, R
**Programming:** Python, Java, JavaScript, C++, C, C#
**Software:** Docker, Kubernetes, AWS, Linux, Git
**Fullstack:** MongoDB, Express, React, Node, Flask, REST, HTML, CSS, jQuery, AJAX
**Coursework:** Data Analytics (AWS, Spark, Scala, Databricks), Machine Learning, Object Oriented Programming, Database, Data Mining, Data Structures, Algorithms

## Education

**Georgia Institute of Technology** Aug 2021 – May 2023
*Master of Science in Computer Science, GPA 3.6* Atlanta, GA

**National Cheng Kung University** Sep 2015 – June 2020
*Bachelor of Science in Computer Science, GPA 3.5* Tainan, Taiwan

## Work Experience

**Georgia Institute of Technology** Aug 2022 – Dec 2022
*Graduate Research Assistant* Atlanta, GA

- Implemented message-passing programs for distributed systems using **actor model** with **C++** parallel programming library **HClib**.
- Researched HClib-Actor programs, and documented the usages of its primitive constructs.

**Academia Sinica** July 2020 – Dec 2020
*Research Intern* Taipei, Taiwan

- Researched Brzozowski's derivative and parser combinators to construct context-free parser using **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 process of importing data from Google Sheets to **BigQuery** with **Matillion ETL** and **Python**.
- Proposed new website layouts to improve user experience and ad revenue by analyzing clickthrough rate.

## Key Projects

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

- Launched the website that retrieved data from **Flask** backend by performing **AJAX** requests with **jQuery**.
- Designed frontend with interactive visualization to display popular books with **D3.js**.
- Preprocessed text data, and developed book recommender by creating NLP model with **Python**, **sklearn**, **pandas** and **NLTK**.

**"Taste" – Mobile App for Finding Restaurants Based on Personal Preference** Oct 2022 – Dec 2022
*Mobile Application* [github]

- Built and designed the frontend with **React Native**, and developed map features with **Google Map APIs**.
- Collaborated with teammates to integrated the app with backend that conformed to **REST APIs** using **Flask** and **Postgres**.

**Air Quality Data Collection, Analysis, and Prediction from Scratch at NCKU** May 2019 – Sep 2019
*Data Analytics, Machine Learning* [github] [CLI]

- Won **3rd Place** in *2019 CSIE Department Research Project Competition*.
- Created a CLI tool for data visualization with **Python** to analyze air quality patterns.
- Presented PM 2.5 forecasts with deviation $<$ **28%** by training **machine learning** models, including regression and time series analysis, with **Python** and **sklearn**.
- Worked in group to containerize **MongoDB** and **Flask** server with **Docker** for data storage and retrieval; collected **4-month** meteorological data using sensors paired to **Arduino**.

**Association Analysis** Oct 2019 – Nov 2019
*Data Mining, Association Rule Mining* [github]

- Implemented the **Apriori algorithm** to find association rules among frequent itemsets in a dataset with **Python**.
- Reduced the number of scans in a dataset by constructing FP (frequent pattern) tree and the **FP-Growth algorithm**.