YI-CHIA (KEVIN) CHEN

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EDUCATION

Georgia Institute of Technology — Atlanta, GA
M.S. in Computer Science, GPA 4.0/4.0 — Aug 2021 – Expected May 2023
- **Courses**: Data & Visual Analytics, Machine Learning, Software Analysis & Test, Intro to Grad Algorithms.

National Cheng Kung University (NCKU) — Tainan, Taiwan
B.S. in Computer Science and Information Engineering (CSIE), GPA 3.55/4.3 — Sep 2015 – Jun 2020
- **Courses**: Fundamentals of Data Analytics, Data Mining, Intro to Database Systems.

WORK EXPERIENCE

Institute of Information Science, Academia Sinica — Taipei, Taiwan
Research Intern in Programming Languages and Formal Methods Lab — Jul 2020 – Dec 2020
- Researched parsing with Brzozowski's derivative and parser combinators.
- Researched program derivation problems: deriving solutions from specifications using Haskell.
- Built a course website for a course at the National Taiwan University using Hakyll.

PIXNET Digital Media Corporation — Taipei, Taiwan
Intern in Data Analysis Team — Aug 2019 – Dec 2019
- Created statistical graphics for evaluating marketing results using Python, R, and DataStudio.
- Analyzed user behavior, such as clickthrough rate (CTR) of links and ads, on the mobile blogging platform, then gave suggestions for improving the website layout.
- Reduced labor costs by streamlining the workflow of importing data from Google Sheets to BigQuery using Matillion.

SELECTED PROJECTS

Air Quality Data Collection, Analysis, and Prediction from Scratch at NCKU — Dec 2018 – Sep 2019
Data Analysis, Data Visualization, Machine Learning
- Collected and preprocessed 4 months of meteorological data using numpy and pandas.
- Visualized the data using matplotlib and seaborn, then found insights, specifically patterns in the periodic changes and correlations between attributes.
- Investigated other factors, such as wind speed and rainfall, that also influence air quality, then crawled them from the Taiwan Weather Bureau using beautiful soup for training model, and reduced the deviation of the model by 1%.
- Built a multivariate linear regression model for next-hour PM 2.5 forecasts with root-mean-square error (RMSE) within 4.5 $\mu g/m^3$, using scikit-learn.
- Won **3rd Place** of 2019 CSIE Department Research Project Competition.

CS: APP Data Lab — Nov 2018
Bitwise Operation, Floating-Point Arithmetic
- Implemented over a hundred integer operations using only C's add, logical not, and bitwise operators, within limited steps.
- Implemented floating-point operations using only C's singed and unsigned integer data type, without casting.

Finance Hero: A Simple Budgeting App — Jun 2018
Window Programming, Object-Oriented Programming, Relational Database
- Built a C# Windows Form app to record user's daily expense, and developed a small game in the app to make tracking spending more enjoyable.
- Used Microsoft SQL Server database to store user data, and used ASP.NET charts to visualize user's budget.

My Blog: kvnyijia's Notes — Nov 2020 – Present
Functional Language, Web Design
- Adopted responsive web design by using CSS to make the website compatible on all devices.
- Used Hakyll and Pandoc library to make compiling markdown and LaTeX to HTML easy.

SKILLS

Programming Languages	C/C++, C#, Python, R, SQL, HTML, CSS, Haskell, Agda.
Tools	Git, Hakyll, BigQuery, DataStudio, Matillion.