Eugene Wang

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SKILLS

- Programming Languages: Java, Python, Go, C/C++, MATLAB, Bash, MIPS/ARM assembly, SQL, Javascript, Kotlin
- Tools: Docker, K8S, PySpark, OpenCV, pandas, sklearn, seaborn, TensorFlow, Keras, Pytorch, Flask, FeathersJS, GCP

EDUCATION

New York University, New York, NY
Master of Science, Computer Engineering, GPA: 3.72 — May 2021

National Taiwan University, Taipei, Taiwan
Master of Science, Chemistry, GPA: 3.8, Thesis: ***Quantum Correction on Bath Time-Correlation Functions*** — Feb 2018
Bachelor of Science, Chemistry, Minor in Chemical Engineering, GPA: 3.3 — Jun 2014

Osaka University, Osaka, Japan
Exchange Program, Japanese Language and Culture, GPA: 3.5, JLPT N1 — Aug 2016

EXPERIENCE

Software Engineer, **ApeVue**, NY, NY https://www.apevue.com — Dec 2021 - Now

- R&D into transparency creation around data tied to $50-billion in Private Equity (PE) trading potential
- Design and implement **ETL** process and DB schema on ~200 PE companies
- Design and implement a mathematical model to statistically describe PE Pricing and market dynamics, which have historically been opaque
- Design and implement an authentication/authorization system with **Firebase** and backend/APIs with **Cloud Functions** to integrate with external frontend teams and UI/UX designers, as demanded by clients and prospects

Software Engineer, **CSI Technology Group**, Keasbey, NJ https://www.csitech.com — Aug - Nov 2021

- Improved Records Management Systems (RMS) for ~20 law enforcement agencies in NJ and PA
- Refine and normalize case data by **MS SQL Server** on law enforcement RMSs to support investigation
- Enhance SQL query efficiency and communicate with account managers to clarify officers' requirements
- Automate deployment by **Powershell** and ensure RMS reliability

Web Backend Intern, **ASUS AICS**, Taipei, Taiwan — Feb - May 2021

- Identified cross-device anonymous users among 3.3B traffic with 0.6 F1 by **Feature Engineering** and **Random Forest**
- Enhanced efficiency of **ETL** pipeline for 1TB data with **PySpark** and **DataBricks**
- Implemented dashboard backend with **FeathersJS** and **PostgreSQL**
- Deployed and fine-tuned **Apache Druid** on **Azure Kubernetes Service** with 30x speedup for 300M records

Data Scientist Intern, **Shopee**, Taipei, Taiwan — Jul - Aug 2020

- Developed a dynamic pricing AI system using **DDPG** algorithm and **PyTorch** to potentially reduce manpower to 20% and raise gross merchandise volume by 10%
- Extracted and cleaned data by efficient **SQL** and **pandas** from raw transaction data into hourly profiles to train AI
- Created backend functions with **Python** on GCP to automatically update prices and databases according to user queries
- Conducted customer segmentation research to establish a marketing strategy and raised conversion rate by 6%
- Built Google Sheets tools to crawl website data and automate business analysis by **Google App Script**

Developer, **g0v** project **Government Data Opener**, Taipei, Taiwan — Jan - Aug 2019
https://github.com/opengovdatatw https://dataopener.tw

- Crawled, analyzed, and visualized 3k+ freedom of information (FOI) requests by **Google Apps Script** and **Python** (*requests*, *BeautifulSoup*, *matplotlib*) to design FOI strategies for 20 NGOs and create request templates for them
- Won g0v and CIVICUS Grant Competition by the FOI request strategies (g0v: 16k USD, CIVICUS: 10k USD)
- Resolved ambiguity in official responses to FOI requests by providing templates and won Taiwan Presidential Hackathon Top 5/132; the templates were officially adopted by authorities concerned

PROJECTS

Machine Learning Course Project, New York, NY — Nov 2020

- Used **OpenCV** to implement road lane detection through camera calibration, edge detection, and Hough transform
- Implemented **Naive Bayes Spam Filtering** to achieve 95% precision on Ling-Spam dataset
- Enforced **FGSM** to perform targeted/non-targeted attack on NN classifier for MNIST dataset
- Actualized **A3C** on CartPole model with **TensorFlow** and **OpenAI Gym**
- Repaired backdoored face recognition CNN by **Fine-Pruning Defense**

Assembler Emulator, **Computing Systems Architecture Course Project**, New York, NY — Dec 2019

- Implemented a MIPS 5-stage pipeline with stalling, forwarding, and branch prediction in **C++**