

# Eugene Wang

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## SKILLS

- Programming Languages: Java, Python, Go, C/C++, MATLAB, Bash, MIPS assembly, ARM assembly, SQL, Javascript
- Tools: Git, Maven, Archiva, Docker, PySpark, Hadoop, OpenCV, pandas, sklearn, seaborn, TensorFlow, Keras

## EDUCATION

**New York University**, New York, NY

Master of Science, Computer Engineering, GPA: 3.8

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

## PROJECTS

**Self-Driving Car**, New York, NY

Jan 2020

- Used **OpenCV** on **Python** to implement road lane detection through camera calibration, edge detection, and Hough transform
- Detected and recognized traffic signs by **CNN** on **TensorFlow** with 93% accuracy

**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++**
- Built branch predictor by bitwise control and achieved maximum theoretical memory efficiency

**Tetris vs Snake, OOP Course Project**, Taipei, Taiwan

Jun 2019

<https://github.com/y56/Java-Tetris-vs-Snake-Game>

- Combined two classical games into a 2-player game by **Java Swing** and **AWT**; each game result was published online automatically
- Won the second price for gameplay design and demo among 50 participants

## EXPERIENCE

**Data Scientist Intern, Shopee**, Taipei, Taiwan

Jul - Aug 2020

- Developed a dynamic pricing AI system using **DDPG** algorithm and **PyTorch** to 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%

**Graduate Assistant, NYU Courant Institute of Mathematical Sciences**, New York, NY

Mar - Jun 2020

- Assisted the faculty and students with administrative and technical difficulties and acted as a liaison between the two
- Contribute to development of strategies for the program, provide recommendations and deliver weekly presentations

**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

**Research Assistant, National Taipei University of Technology, Geomatics Lab**, Taipei, Taiwan

May - Jul 2019

<https://gitlab.com/h2beaver>

- Wrote test cases and unit tests to validate 20GB GIS data by **JUnit** and reduced the manpower to 10%
- Managed dependencies and introduced version control to GIS database by **Maven**, **Archiva**, and **GitLab CI/CD** to enable automatic merge and trace-back

**R&D Intern, JNC Technology Co., LTD**, Tainan, Taiwan

Mar - Apr 2018

- Designed experimental apparatus using **SolidWorks** and established calibration procedures for air quality sensors
- Built the first air cleaner prototype and evaluated its performance; the design was adopted for products

**Volunteer, Huashan Welfare Foundation**, Kaohsiung, Taiwan

Apr 2018 - Mar 2019

- Helped solitary elderly people with household chores, provided regular medical care, and promoted home safety
- Reported their health to social workers and matched them with welfare resources