

Yun-Chung (George) Pan

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EDUCATION

Cornell University, Ithaca, United States Aug 2021 - May 2022

M.Eng. in Chemical and Biomolecular Engineering (Overall GPA: 3.9/4.3)

- Specialization: Computational Informatics

National Taipei University of Technology, Taipei, Taiwan Sep 2015 - Jun 2019

B.S. in Chemical Engineering and Biotechnology (Overall GPA: 3.7/4.0)

- Honors and Awards: NTUT Academic Excellence Award for top 3 (2 times), Wu Jung-Ya Scholarship (1 time)

SKILLS

Tools: Python, R, SQL, Julia, Fortran, Git, Linux, Power BI

Packages: Scikit-Learn, Tensorflow, Keras, Numpy, Pandas, Scipy, Matplotlib, Seaborn, Pyomo, BeautifulSoup

Relevant Courses: Data Mining, Machine Learning, Big Data Technologies, Optimization, Time Series Analysis, Bayesian Methods, Probability, Statistics and Data Analysis for Physical Sciences, A/B Testing, Molecular Simulation

WORK EXPERIENCE

Graduate Researcher, Cornell University, Ithaca, NY, United States Aug 2021 - Present

Julia / Git / REST API

- Developed an open-source wrapper around Alpha Vantage API in Julia programming language to access 15 different market data endpoints from US stock exchanges; reduced the time cost in data preprocessing by 60% [↗](#)

Medical Affairs Intern, Merck Sharp & Dohme (MSD), Taipei, Taiwan Jun 2020 - Jun 2021

Python / Scikit-Learn / Pandas / SQL / ETL

- Developed regression and clustering algorithms to evaluate disease burden from human papillomavirus (HPV)-related cancers in Taiwan from a real-world perspective of 50+ years' worth of census data
- Publication: Lily Wu, Blair Chien, [Yun-Chung Pan](#) et al. "Economic Burden of Cervical and Head and Neck Cancer in Taiwan From a Societal Perspective." *in preparation*.

Data Research Analyst, NTUT Multiscale Thermodynamics Lab, Taipei, Taiwan Jul 2018 - Jul 2019

Fortran / Linux / Molecular Simulation

- Developed simulation package for creating a simpler but more efficient electrostatic model by modeling self-assembly and morphology of ionic surfactants with a relative error lower than 5%
- Publication: Zong-Yuan Cai, [Yun-Chung Pan](#) and Ming-Tsung Lee. "Modeling Micellization of Rhamnolipid Biosurfactant By Mesoscale Simulation." *AICHE Annual Meeting, Florida, Nov. 2019* [↗](#)

PROJECTS

Portfolio Optimization of NASDAQ-100 During The COVID-19 Pandemic [↗](#) Sep 2021 - Dec 2021

Python / Numpy / Pyomo / Web Scraping

- Led a team of 4 to develop a mixed-integer linear programming model that optimized asset allocation among 100 components of the NASDAQ index; successfully generated an interpretation for phenomena in the 2020 stock market

Predicting Wine Preferences from Physicochemical Properties [↗](#) Jun 2021 - Aug 2021

R / Caret / ggplot2 / Data Mining / ETL

- Utilized regression and classification algorithms to identify properties that affect the quality of red and white wine; developed a classifier with over 90% accuracy

VOLUNTEERING ACTIVITIES

Vice Director, NTUT Student Association, Taipei, Taiwan Jul 2016 - Jun 2017

- Organized and hosted a school orientation for 60+ incoming students and advised on course and major selection

Leader, NTUT Service-Learning Club, Taipei, Taiwan Feb 2016 - Jun 2016

- Led team of 8 to teach 80+ high-school students from remote areas in Math and Science twice a week