Tsai-Chen Hsieh

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EDUCATION

MS in Computer Science — Sep. 2022 – Dec. 2023
Columbia University — *New York, USA*

BS in Management Information Systems (GPA: 3.94 / 4.3) — Sep. 2017 – Jan. 2022
National Chengchi University — *Taipei, Taiwan*
- Academic excellence award (Top 2%) for the spring semester of 2020
- Relevant coursework: Algorithms, Operating System, Data Science, ConvNet & Visual Recognition, Database Management Systems, Data Structure, Programming Language (Object-oriented Programming)

WORK EXPERIENCE

Cybersecurity Software Engineering Intern — Aug. 2021 – Feb. 2022
BlockChain Security — *Taipei, Taiwan*
- Developed a system that finds similarities between media content to detect plagiarism
- Served as part of a government plan appointed by the Ministry of Culture in Taiwan
- Applied both ORB algorithm and average hashing for image comparison and audio fingerprinting for music comparison, provided both web interface and API for the user to interact via **Python, Flask, MySQL, and OpenCV**

Data Analysis Engineering Intern — Jan. 2021 – Jun. 2021
Ret[AI]ling Data Enterprise — *Taipei, Taiwan*
- Utilized Random Forest and transaction data in the millions to predict individual customer's growth rate, grouped potentially valuable consumers for precision marketing via **Python, Pandas, and Scikit-learn**
- Built a customer data platform as an official company product, contributed reactive visualizations and automated data preprocessing pipelines via **Python, Pandas, and Power BI**

Office Administrative Intern — Jul. 2019 – Jun. 2020
Microsoft Taiwan — *Taipei, Taiwan*
- Assisted law enforcement in requesting digital evidence regarding criminal cases
- Led 30 people as vice general coordinator of the 2020 Microsoft Office Tour, reached 138,890 accounts on Facebook, attracted 1,777 applicants for the event, and had a 4.7/5 satisfaction rate among 450 participants

PROJECTS

SmartFarm – Agriculture Management Platform — Jul. 2019 – Jan. 2021
- Designed a system to monitor farmland data; built real-time IoT data receivers, visualized charts, reactive planting templates, and abnormal data detection via **Python, PHP, JavaScript, Paho, and Highcharts**
- Won 2nd place in the 25th International ICT Innovative Services Awards, Industry-Academia Cooperation group, a nationwide event with 892 participating teams at the time of attendance
- Served as part of two plans approved by the Ministry of Economic Affairs in Taiwan
- Facilitated overall project progress and communicated specifications with the sponsor company as team leader

League of Legends – Analysis and Prediction (https://bit.ly/3ym7pQw) — Dec. 2020 – Jan. 2021
- Analyzed winning factors and predicted match outcomes using Riot developer API on the game *League of Legends*; developed interactive visuals on results and deployed them to the web via **R and Shiny Apps**
- Voted the best project out of 12 groups in Data Science class

Personal Website/Blog (https://tsai00150.github.io/Tsai-Hsieh-Blog) — Jun. 2022 – Present
- Built website with a customized theme via **Jekyll, HTML, and CSS**

TECHNICAL SKILLS

- **Programming**: Python, C++, R, Java, HTML, CSS, PHP, JavaScript
- **Frameworks/Libraries:** Flask, OpenCV, Scikit-learn, Pandas, Numpy, Shiny Apps, Paho, Highcharts, TensorFlow
- **Tools:** Git/Gitlab, MySQL, Postman, PuTTY, Linux, Docker, Power BI, Jekyll
- **Computer qualification**: Microsoft Azure Fundamentals (May 2020)