Wen-Hsing Huang

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EDUCATION

University of Illinois Urbana-Champaign 08/2022 - 12/2023 (Flexible)
Master of Computer Science Champaign, IL

- **GPA**: 3.59 / 4.0
- **Coursework**: Distributed Systems, Database Systems, Topics in Software Engineering

National Central University 09/2018 - 06/2022
Bachelor of Science in Computer Science and Information Engineering Taoyuan, Taiwan

- **GPA**: 3.98 / 4.0, **Rank in Dept.**: 1^{st} / 101
- **Coursework**: Data Structure, Algorithms, Operating System, Computer Organization, Computer Network
- **Awards**: Phi Tau Phi honorary member, 3x ICPC regional contest Bronze Award, SHUN-I CHU ZyXEL Scholarship (ca. $3600), Scholarship for Excellence (ca. $700), 6x Honor for Academic Excellence (ca. $200)

WORK EXPERIENCE

Microsoft 07/2021 - 01/2022
Program Manager Intern Taipei, Taiwan

- Developed and maintained an automated report for monitoring product demand and OKRs in advertising industry.
- Created and optimized data pipelines using internal SQL databases and Azure Data Explorer.
- Utilized Power BI to analyze big data and design visualizations for data insights.
- Conducted data analysis on production alerts and provided summaries to developers for problem resolution.

Institute of Information Science, Academia Sinica 07/2020 - 08/2020
Research Assistant Taipei, Taiwan

- Implemented Multicast Rerouting and Update Scheduling Algorithm on real-world network topologies using Python and igraph library.
- Conducted experiments and established baselines for the paper "Multicast Traffic Engineering with Segment Trees in Software Defined Networks".

National Central University 03/2020 - 06/2021
Undergraduate Research Assistant Taoyuan, Taiwan

- Developed object tracking and trajectory prediction of self-driving system using Python and open-source resources.
- Integrated a higher performance detection-based tracking solution, resulting in a 45% reduction in id switches.
- Revised data pipeline to retrain trajectory prediction model with new datasets to avoid open-source contamination.

PROJECTS

Distributed job processing system

- Built a system with Python and network programming that encompasses failure detection, membership management, file system, and job scheduling capabilities.
- Implemented SWIM-style failure detection and ring-based membership management for high availability and fault tolerance.
- Designed an efficient job scheduling algorithm to balance processing time between batches within 20% difference.

PUBLICATION

Chia-Yu Lo, **Wen-Hsing Huang**, Ming-Feng Ho, Min-Te Sun, Ling-Jyh Chen, Kazuya Sakai, Wei-Shinn Ku,
"Recurrent Learning on PM_{2.5} Prediction Based on Clustered Airbox Dataset"
in **IEEE Transactions on Knowledge and Data Engineering**.

SKILLS

Programming Languages: C/C++, Python, Java, SQL, Matlab, HTML/CSS, Assembly, LaTeX
Skills: Distributed Systems, Database Systems, Network Programming, Machine Learning, Data Analytic, Git, Power BI
Languages: English (fluent), Mandarin (Native)