

Jia-Wei Liao

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Summary

I am Jiawei. My research focuses on Deep Learning and Computer Vision. Currently, I serve as a Research Assistant at Academia Sinica and lead a team investigating Generative AI. My interest extends to Data Science, evident from my year-long tenure as a Data Analyst Intern at Appier. During the internship, I engaged in client data analysis, feature engineering, business model development, and established key business metrics. My commitment to clean code architecture, design patterns, and high-quality programming was nurtured during my time at Appier. I possess strong communication and presentation skills, honed through extensive cross-department collaboration. Passionate about contributing to innovation, I am eager to apply my skills to solve challenging problems in the technology industry and open to discussions about potential collaborations.

Education

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| National Taiwan University (NTU) PhD Student of Computer Science and Information Engineering · CMLab · GDSC · NTU DAC · TMBA | Sep 2022 - Present GPA: 4.28 / 4.30 |
| National Yang Ming Chiao Tung University (NYCU) Master of Applied Mathematics · GIMI LAB | Sep 2020 - Aug 2022 GPA: 4.29 / 4.30 |
| National Taiwan Normal University (NTNU) Bachelor of Mathematics with Educational Program and Scientific Computation Program | Aug 2016 - Jun 2020 GPA: 4.06 / 4.30 |

Work Experience

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| Research Assistant Academia Sinica AIILab | Jul 2023 - Present <i>#Computer Vision #Generative AI #Diffusion Model</i> |
| <ul style="list-style-type: none">Led a team of three undergraduates in conducting research on the application of generative models, resulting in a submission to top-tier conferences.Developed a generative model for aesthetic QR codes, using the diffusion model and ControlNet to produce high-quality, scannable designs.Designed a Scanning-Robust Guidance (SRG) with differentiability and convexity, achieving nearly 100% scan success for generative QR codes. | |
| Software Engineer Intern intel Wireless Solution Group | Jul 2024 - Aug 2024 <i>#LLM #RAG</i> |
| <ul style="list-style-type: none">Implemented a Retrieval-Augmented Generation (RAG) system using the open-source Llama 3.1 model for Intel's internal database.Developed a full-stack application by integrating Flask for backend-frontend communication and designing the frontend UI. | |
| Data Analyst Intern Appier AiDeal Scientist Team | Aug 2022 - Jun 2023 <i>#Machine Learning #Data Analysis #Feature Engineering</i> |
| <ul style="list-style-type: none">Developed a business model to identify user purchase tendencies and established key evaluation metrics to optimize business goals.Designed innovative features and feature selector to improve the CIR about 3% in alignment with business goals.Produced Jupyter scripts to aid in data analysis and fulfill client data requests for the Project Manager. | |

Projects

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Skills

- **Programming Language:** Python (PyTorch, TensorFlow, Scikit-learn, Numpy, Pandas), MATLAB, C, and SQL
- **Dev Tools:** Git, VS Code, Jupyter, and Vim

Honors

- AI CUP Golden Medal Award (× 1), Merit Award (× 1), and Honorable Mention Award (× 3)
- TWSIAM 2024 Thesis Award, 2022 Poster Second Place Award
- Academia Sinica Dr. Hung-Ching Chou Scholarship
- Dean's List Award, NYCU, NTNU