Jia-Wei Liao

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SUMMARY

My name is Jia-Wei. I recently completed a one-year tenure at Appier as a data analyst intern, and I am currently pursuing my Ph.D. degree at NTU CSIE. Additionally, I am working as a research intern at the Academia Sinica. With hands-on experience specifically gained from my internship at Appier, I have developed a strong foundation in the field. My research interests lie in data science and computer vision. I am eager to apply my skills and knowledge to tackle new challenges and explore opportunities in these domains within the industry. Please don't hesitate to contact me for further information.

EDUCATION

National Taiwan University (NTU)   Taiwan, Taipei
PhD Student of Computer Science and Information Engineering · CMLab · GPA: 4.3 / 4.3 · Ranking: 1 / 18   *Sep 2022 - Present*
- **Related Courses:** Information Retrieval and Extraction, and Computer Vision
- **TA Courses:** Python Programming (111-2), Digit, AI, and Quantum Computing (111-1), and Linear Algebra (111-1)

National Yang Ming Chiao Tung University (NYCU)   Taiwan, Hsinchu
Master of Applied Mathematics · GPA: 4.29 / 4.3 · Ranking: 1 / 27   *Sep 2020 - Aug 2022*
- **Related Courses:** Machine Learning, Data Mining, Data Science, and Visual Recognition using Deep Learning
- **TA Courses:** Calculus (109-1, 109-2, 110-1, 110-2), Quantum Computing (110-1)

National Taiwan Normal University (NTNU)   Taiwan, Taipei
Bachelor of Mathematics with Educational Program · GPA: 4.06 / 4.3 · Ranking: 3 / 89   *Aug 2016 - Jun 2020*
- **TA Courses:** Advance Calculus (108-1, 108-2), Differential Equation (108-1, 108-2)

EXPERIENCE

Academia Sinica   Taiwan, Taipei
Research Intern in AIIULab   *Jul 2022 - Present*
- Develop diffusion model for QR-code generation by using Hugging Face diffuser
- Design the loss function to guide the generative image scanning successfully
- Design the algorithm to repainting the image for error region

Appier   Taiwan, Taipei
Data Analyst Intern in AiDeal Scientist Team   *Aug 2022 - Jun 2023*
- Develop new features to improve the accuracy of the model.
- Develop a model to detect the tendency of users to purchase items.
- Develop evaluation metrics to measure the cost-benefit trade-off of the implementation.
- Develop new scripts to assist in data analysis and utilize web scraping to detect patterns on web pages.

NTU Data Analytics Club (DAC)   Taiwan, Taipei
5th Director of Academic Affairs   *Jun 2023 - Present*
- **Skills:** Data Analysis, Business Analysis

TMBA   Taiwan, Taipei
Member of Strategic Marketing Department   *Jul 2022 - Present*
- **Skills:** Data Analysis, Marketing Strategies, Presentation and Communication Ability

National Center for Theoretical Sciences (NCTS)   Taiwan, Taipei
Teaching Assistant   *Jul 2022 - Aug 2022*
- Design a new variational-based image denoising model demonstrate its feasibility.
- Design an end-to-end image stitching algorithm and improve computational efficiency.

SKILLS

- **Programming Language:** Python, MATLAB, C, C++, SQL, and LaTeX
- **Framework:** PyTorch, TensorFlow, Keras, Scikit-learn, Numpy, and Pandas
- **Developer Tool:** Git, VS Code, Jupyter, and Vim

PROJECTS

- **Multimodal Pathological Voice Classification** · Python · ⛓ · 📄   *Dec 2022*
- **Crop Image Recognition** · Python · ⛓ · 📄   *Dec 2022*
- **Interpretive Information Labeling for Natural Language Processing** · Python   *Dec 2022*
- **Contour Segmentation for Spread Through Air Spaces in Lung Adenocarcinoma** · Python · ⛓   *Jun 2022*
- **Supervised Learning for Few-Shot Orchid types Classification with Prior Guided Feature** · Python · ⛓ · 📄   *Jun 2022*
- **Ultrasound Nerve Segmentation (Kaggle)** · Python · ⛓ · 📄   *Jan 2022*
- **Text Mining and Sentiment Analysis for Yelp Reviews** · Python · 📄   *Dec 2021*
- **Recommender System for Large-Scale Dataset** · MATLAB · ⛓ · 📄   *Dec 2021*

HONORS

- AI CUP 2023 Spring Multimodal Pathological Voice Classification Competition Golden Medal Award   *Jun 2023*
- AI CUP 2022 Fall Crop Image Recognition Competition Honorable Mention Award   *Jan 2023*
- AI CUP 2022 Fall Interpretable NLP Competition Honorable Mention Award   *Jan 2023*
- AI CUP 2022 Fall UAV Object Detection Competition Honorable Mention Award   *Jan 2023*
- Diligent Doctoral Student Scholarship, *NTU*   *Jan 2023*
- AI CUP 2022 Spring STAS Segmentation Competition MATLAB Outstanding Application First Prize   *Jul 2022*
- AI CUP 2022 Spring STAS Competition Merit Award   *Jul 2022*
- TWSIAM 2022 Paper Poster Contest Second Place Award   *Jul 2022*
- Academic Excellence Award, *NYCU*   *Dec 2021*
- Dr. Hung-Ching Chou Scholarship, *Academia Sinica*   *Dec 2021*
- Mr. Dun-Fu Hu Scholarship, *NYCU*   *Nov 2021*
- Academic Excellence Award, *NTNU*   *Oct 2020*
- Ministry of Education Scholarship, *NTNU*   *Oct 2018*

TALKS

- MICCAI 2022 Conference Online Poster Presentation   *Sep 2022*
- SITCON 2022 Speaker, *Academia Sinica* ▶   *Sep 2022*
- TWSIAM 2022 Poster Presentation, *NYCU*   *Jul 2022*
- IOH Open Personal Experience Sharing ▶
- 2022 NCTS Student Workshop on Scientific Computing Speaker   *Apr 2022*
- 2020 NCTS-USRP Final Presentation   *Aug 2020*

PUBLICATIONS

- **J.-W. Liao**, T.-M. Huang, T. Li, W.-W. Lin, H. Wang, and S.-T. Yau, An UNet-based Brain Tumor Segmentation Framework via Optimal Mass Transportation Pre-processing, *MICCAI BrainLes 2022 Workshop*