鞠睿阳 (Rui-Yang Ju)

2000.01.26 | Email | Homepage | GitHub | Google Scholar | LinkedIn | Taipei City, Taiwan

教育经历

国立台湾大学 — 台北, 台湾

理学硕士: 资讯网络与多媒体研究所 — 2023.09 – 2025.06

- 总均分: **95.23/100**, GPA: **4.17/4.3**
- 实验室: **imLab**, 指导教授: **洪一平教授**

淡江大学 — 新北, 台湾

工程学士: 电子与计算机工程系 — 2019.09 – 2023.06

- 总均分: **94.50/100**, GPA: **4.0/4.0**, 系排名: **1/68**
- 实验室: **AMOS Lab.**, 指导教授: **江正雄教授**

交换经历

剑桥大学 — 剑桥, 英国

在线课程: 人工智能伦理与社会 — 2021.06 – 2021.07

复旦大学 — 上海, 中国

暑期课程: 科学研究方法与论文写作 — 2019.09 – 2019.09

北京大学 — 北京, 中国

暑期课程: 视频编辑 — 2019.08 – 2019.08

研究兴趣

我的主要研究兴趣包括深度学习、神经网络、计算机视觉和图像处理。此外，我还参与了一些跨领域的项目，例如自然语言处理和语音处理。我已完成及正在进行的研究主要集中在以下课题:

[R5] **三维头像高斯混合形变**: 计算机图形学、三维计算机视觉、高斯混合形变、高斯喷溅、面部动画、面部跟踪
[R4] **三维面部表情重建**: 计算机图形学、三维计算机视觉、图形渲染、面部重建、面部动画
[R3] **彩色退化文件图像二值化**: 图像生成、图像增强、图像二值化、生成对抗网络、离散小波变换
[R2] **儿科手腕创伤 X 光图像中的骨折检测**: 医学图像处理、医学影像诊断、目标检测、YOLO、注意力机制
[R1] **神经网络模型中层和块的连接策略**: 图像分类、图像超分辨率、卷积神经网络、Transformer、残差学习

出版物

期刊论文

[J7] Chun-Tse Chien, Rui-Yang Ju, Kuang-Yi Chou, Enkaer Xieerke, Jen-Shiun Chiang, **"YOLOv8-AM: YOLOv8 Based on Effective Attention Mechanisms for Pediatric Wrist Fracture Detection"**, *IEEE Access*, 2025. **(IF 3.4)** [arXiv] [DOI] [GitHub]

[J6] Rui-Yang Ju, Yu-Shian Lin, Yanlin Jin, Chih-Chia Chen, Chun-Tse Chien, Jen-Shiun Chiang, **"Three-stage Binarization of Color Document Images Based on Discrete Wavelet Transform and Generative Adversarial Networks"**, *Knowledge-Based Systems*, 2024. **(IF 7.2)** [arXiv] [DOI] [GitHub]

[J5] Chun-Tse Chien, Rui-Yang Ju, Kuang-Yi Chou, Jen-Shiun Chiang, **"YOLOv9 for Fracture Detection in Pediatric Wrist Trauma X-ray Images"**, *Electronics Letters*, 2024. **(IF 0.7)** [arXiv] [DOI] [GitHub]

[J4] Rui-Yang Ju, Weiming Cai, **"Fracture Detection in Pediatric Wrist Trauma X-ray Images Using YOLOv8 Algorithm"**, *Scientific Reports*, 2023. **(IF 3.8)** [arXiv] [DOI] [GitHub]

[J3] Rui-Yang Ju*, Chih-Chia Chen*, Jen-Shiun Chiang, Yu-Shian Lin, Wei-Han Chen (*=equal contribution), **"Resolution Enhancement Processing on Low Quality Images Using Swin Transformer Based on Interval Dense Connection Strategy"**, *Multimedia Tools and Applications (MTA)*, 2023. **(IF 3.0)** [arXiv] [DOI] [GitHub]

[J2] Rui-Yang Ju, Ting-Yu Lin, Jia-Hao Jian, Jen-Shiun Chiang, **"Efficient Convolutional Neural Networks on Raspberry Pi for Image Classification"**, *Journal of Real-Time Image Processing (JRTIP)*, 2023. **(IF 2.9)** [arXiv] [DOI] [GitHub]

[J1] Rui-Yang Ju, Ting-Yu Lin, Jia-Hao Jian, Jen-Shiun Chiang, Wei-Bin Yang, **"ThreshNet: An Efficient DenseNet Using Threshold Mechanism to Reduce Connections"**, *IEEE Access*, 2022. **(IF 3.9)** [arXiv] [DOI] [GitHub]

会议论文

[C9] Yanlin Jin, Rui-Yang Ju, Haojun Liu, Yuzhong Zhong, **"ORB-SfMLearner: ORB-Guided Self-supervised Visual Odometry with Selective Online Adaptation"**, *IEEE International Conference on Robotics and Automation* (*ICRA*), Atlanta, USA, 2025. [arXiv] [Project]

[C8] Rui-Yang Ju, Chun-Tse Chien, Chia-Min Lin, Jen-Shiun Chiang, **"Global Context Modeling in YOLOv8 for Pediatric Wrist Fracture Detection"**, *International Symposium on Intelligent Signal Processing and Communication Systems* (*ISPACS*), Kaohsiung, Taiwan, 2024. [arXiv] [DOI] [GitHub]

[C7] Yanbing Bai, Siao Li, Rui-Yang Ju, Zihao Yang, Jinze Yu, Jen-Shiun Chiang, **"FAD-SAR: A Novel Fishing Activity Detection System via Synthetic Aperture Radar Images Based on Deep Learning Method"**, *International Symposium on Intelligent Signal Processing and Communication Systems* (*ISPACS*), Kaohsiung, Taiwan, 2024. [arXiv] [DOI]

[C6] Rui-Yang Ju, Chun-Tse Chien, Jen-Shiun Chiang, **"YOLOv8-ResCBAM: YOLOv8 Based on An Effective Attention Module for Pediatric Wrist Fracture Detection"**, *International Conference on Neural Information Processing* (*ICONIP*), Auckland, New Zealand, 2024. [arXiv] [GitHub]

[C5] Rui-Yang Ju, Yu-Shian Lin, Jen-Shiun Chiang, Chih-Chia Chen, Wei-Han Chen, Chun-Tse Chien, **"CCDWT-GAN: Generative Adversarial Networks Based on Color Channel Using Discrete Wavelet Transform for Document Image Binarization"**, *Pacific Rim International Conferences on Artificial Intelligence* (*PRICAI*), Jakarta, Indonesia, 2023. [arXiv] [DOI] [GitHub]

[C4] Rui-Yang Ju, Jen-Shiun Chiang, Chih-Chia Chen, Yu-Shian Lin, **"Connection Reduction of DenseNet for Image Recognition"**, *International Symposium on Intelligent Signal Processing and Communication Systems* (*ISPACS*), Penang, Malaysia, 2022. [arXiv] [DOI] [GitHub]

[C3] Rui-Yang Ju, Ting-Yu Lin, Jen-Shiun Chiang, **"TripleNet: A Low-Parameter Network for Low Computing Power Platform"**, *IET International Conference on Engineering Technologies and Applications* (*IET-ICETA*), Changhua, Taiwan, 2022. [arXiv] [DOI] [GitHub]

[C2] Rui-Yang Ju, Ting-Yu Lin, Jen-Shiun Chiang, Jia-Hao Jian, Yu-Shian Lin, Liu-Rui-Yi Huang, **"Aggregated Pyramid Vision Transformer: Split-transform-merge Strategy for Image Recognition without Convolutions"**, *IEEE International Conference on Consumer Electronics - Taiwan* (*ICCE-TW*), Taipei, Taiwan, 2022. [arXiv] [DOI]

[C1] Rui-Yang Ju, Ting-Yu Lin, Jen-Shiun Chiang, **"New Pruning Method Based on DenseNet Network for Image Classification"**, *International Conference on Technologies and Applications of Artificial Intelligence* (*TAAI*), Taichung, Taiwan, 2021. [arXiv] [DOI]

预列印论文

[A3] Rui-Yang Ju, Chun-Tse Chien, Enkaer Xieerke, Jen-Shiun Chiang, **"Pediatric Wrist Fracture Detection Using Feature Context Excitation Modules in X-ray Images"**, *arXiv preprint*, 2024. [arXiv] [GitHub]

[A2] Rui-Yang Ju, KokSheik Wong, Jen-Shiun Chiang, **"Efficient GANs for Document Image Binarization Based on DWT and Normalization"**, *arXiv preprint*, 2024. [arXiv] [GitHub]

[A1] Yanbing Bai, Zihao Yang, Jinze Yu, Rui-Yang Ju, Bin Yang, Erick Mas, Shunichi Koshimura, **"Flood data analysis on SpaceNet 8 using Apache Sedona"**, *arXiv preprint*, 2024. [arXiv]

专利

[P2] Rui-Yang Ju, **"可吸尘之装载装置"**, 台湾新型专利, TWM595589U, 2020.05. [Google Patents]

[P1] Rui-Yang Ju, **"可收纳烟蒂之烟盒"**, 台湾新型专利, TWM576794U, 2019.04. [Google Patents]

研究项目

共同研究者

[G2] **应用于建物裂缝侦测之人工智慧影像超解析度与语义分割技术研究与实现**, 台湾科学及技术委员会, 由江正雄教授主持, 2023 – 2025, NT$1,756,000.

[G1] **基于 Transformer 架构之高效率多特徵融合文件语义分割系统之研究**, 台湾科学及技术委员会, 由江正雄教授主持, 2022 – 2023, NT$690,000.

奖学金

[S5] 国立台湾大学奖学金, 2023 – 2025, NT$25,000.
[S4] 国立台湾大学 (imLab) 奖学金, 2024, NT$36,000.
[S3] 中华国际财经创意交流协会 (SIBIA) 奖学金, 2021, 2022, 2024, US$900.
[S2] 淡江大学科研奖学金, 2021 – 2022, NT$48,000.
[S1] 淡江大学学业奖学金 (Top 1%), 2021, 2022, NT$20,000.

荣誉及奖项

[H3] 银牌 (前 4%), Google 通用图像嵌入挑战赛, ECCV 2022 竞赛, 2022.10
[H2] 工学院大禹奖, 淡江大学, 2022.05
[H1] 创新创业竞赛佳作奖, 淡江大学, 2021.05

专业服务

期刊审稿人

IEEE Signal Processing Letters.
Cognitive Computation.
Telecommunication Systems.
International Journal of Computational Intelligence Systems.
Computer Methods in Biomechanics and Biomedical Engineering: Imaging & Visualization.
International Journal of Multimedia Information Retrieval.
Scientific Reports.
Plos One.
Signal, Image and Video Processing.
The Journal of Supercomputing.
Frontiers in Computer Science.
International Journal of Machine Learning and Cybernetics.
Knowledge-based Systems.

会议委员会

International Joint Conference on Neural Networks (IJCNN), Rome, Italy, 2025, **Reviewer**.
IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), Hyderabad, India, 2025, **Reviewer**.
Pacific Rim International Conference on Artificial Intelligence (PRICAI), Kyoto, Japan, 2024, **Program Committee**.
Pacific Rim International Conference on Artificial Intelligence (PRICAI), Jakarta, Indonesia, 2023, **Program Committee**.

专业会员

IET 英国工程技术学会会员 (学生会员: 2022.06 – 2023.09) 2022.06 – Present
IEEE 电子电机工程师学会学生会员 2022.03 – Present