



**DR. NURUL BINTI JAPAR** 

Senior Lecturer

Department of Artificial Intelligence

Faculty of Computer Science and Information Technology

 nuruljapar @ um.edu.my +6013 7833287 ResearcherID Scopus Author ID Google Scholar ORCID ID

BIOGRAPHY

Nurul Japar is a Senior Lecturer in the Department of Artificial Intelligence at Faculty of Computer Science and Information Technology, Universiti Malaya, Malaysia. She holds a Ph.D. in Computer Vision research area, earned in 2022, and completed her Bachelor's degree in Computer Science (Artificial Intelligence) in 2018 at Universiti Malaya. Her expertise lies in computer vision and machine learning, with a focus on object detection, classification, recognition, and vision-language models.

PUBLICATIONS

1. Izhar, A., Idris, N., & Japar, N. (2025). Engaging preference optimization alignment in large language model for continual radiology report generation: A hybrid approach. *Cognitive Computation*, 17(1). <https://doi.org/10.1007/s12559-025-10404-6>
2. Zhang, X., Alhendi, O., Hamid, S. H., Japar, N., & Nor, A. M. (2024). A computer vision model for seaweed foreign object detection using deep learning. *Sustainability*, 16(20), 9061. <https://doi.org/10.3390/su16209061>
3. Japar, N., Kok, V. J., & Chan, C. S. (2021a). Coherent group detection in still image. *Multimedia Tools and Applications*, 80(14), 22007–22026. <https://doi.org/10.1007/s11042-021-10763-w>
4. Japar, N., Kok, V. J., & Chan, C. S. (2021b). Collectiveness analysis with visual attributes. *Neurocomputing*, 463, 77–90. <https://doi.org/10.1016/j.neucom.2021.08.038>
5. Yin, B. Y., & Japar, N. (2024). Salient guided text detection in e-commerce images. *2024 IEEE International Conference on Image Processing (ICIP)*, 991–997. <https://doi.org/10.1109/icip51287.2024.10647436>
6. Japar, N., Chan, C. S., & Kok, V. J. (2019). Coherent crowd analysis in still image. *2019 IEEE 21st International Workshop on Multimedia Signal Processing (MMSP)*, 1–6. <https://doi.org/10.1109/mmisp.2019.8901763>
7. Lim, J. H., Japar, N., Ng, C. C., & Chan, C. S. (2018). Unprecedented usage of pre-trained cnns on Beauty product. *Proceedings of the 26th ACM International Conference on Multimedia*, 2068–2072. <https://doi.org/10.1145/3240508.3266433>

RESEARCH PROJECTS

1. **2024 - 2027, UNIVERSITI MALAYA RESEARCH EXCELLENCE GRANT (UMREG)**
RenalGuard: A Machine Learning-Based Early Prediction Model for Acute Kidney Injury and Kidney Disease Progression Post Coronary Artery Bypass Graft Surgery (Co-Researcher)
2. **2024 - 2027, Fundamental Research Grant Scheme (FRGS)**
Delving Into Secure Federated Unlearning: Exploring Gradient Dropping Strategies For Decentralized Knowledge Removal (Co-Researcher)
3. **2024 - 2027, Fundamental Research Grant Scheme (FRGS)**
Vocabulary Sharing Framework For Malaysian Sign Language Translation Using Large Language Model And Deep Learning (Principal Investigator(PI))
4. **2023 - 2026, Fundamental Research Grant Scheme (FRGS)**
Deep Learning In Molecular Descriptors Mining And Optimization For Drug-potentials Targeting G Protein-coupled Receptors (Co-Researcher)
5. **2023 - 2025, Fundamental Research Grant Scheme (FRGS)**
A Lightweight Network Traffic Classifier For Resource-constrained Networks Using Explainable Artificial Intelligence (Co-Researcher)
6. **2023 - 2024, Private Funding**
Employee Attendance System Using Facial Recognition With Liveness Detection (Principal Investigator(PI))
7. **2024 - 2026, Bantuan Khas Penyelidikan (BKP Special)**
Generative Adversarial Networks for Mitigating Class Imbalance in Network Traffic Classification (Co-Researcher)
8. **2024 - 2026, Bantuan Khas Penyelidikan (BKP Special)**
Learning Deep Source Code Representation for Software Vulnerability Detection using Large Language Models (Co-Researcher)
6. **2023 - 2025, Bantuan Khas Penyelidikan (BKP Special)**
Malaysian Sign Language (MSL) Video-Text Retrieval using Deep Learning (Principal Investigator(PI))

ACADEMIC QUALIFICATION

- **PhD, Computer Science (Artificial Intelligence), 2022**
Universiti Malaya (UM)
- **B.Sc, Computer Science (Artificial Intelligence), 2018**
Universiti Malaya (UM)

PROFESSIONAL MEMBERSHIP

- **IEEE MEMBERSHIP**
2022 - 2024 (Member)
- **IEEE SIGNAL PROCESSING SOCIETY**
2022 - 2023 (Member), 2024 (Executive Committee)
- **IEEE COMPUTATIONAL INTELLIGENCE SOCIETY**
2024 (Executive Committee)

TEACHING COURSES

- (2022 - 2024) **WIA 1002** Data Structure, *Undergraduate*
- (2023 - 2024) **WID 3002** Cognitive Science, *Undergraduate*
- (2023 - 2025) **WID 3008** Image Processing, *Undergraduate*
- (2023 - 2025) **WID 3013** Computer Vision and Pattern Recognition, *Undergraduate*
- (2023 - 2025) **WQF7006** Computer Vision and Image Processing, *Postgraduate*
- (2023 - 2025) **WQD7001** Principles of Data Science, *Postgraduate*

RESEARCH PROJECT SUPERVISION

PhD

- (2024) Leveraging Large Language Models and Deep Learning for Malaysian Sign Language Translation, *Muhammad Tasnimsyamim Bin Abdul Raki*.
- (2024) Crowd Anomaly Detection based on Surveillance Videos, *Chu Chengxi*.
- (2024) Explainable AI for Multimodal Tasks in Medical Domain, *Zeng Ting*.

Master

- (2024) Advancing Radiology Report Generation: Multi-Modal Fusion and Alignment in Deep Learning, and Preference Optimization in Large Language Models, *Amaan Izhar*.
- (2024) Salient-guided Multi-Feature Approach for Text Detection in E-Commerce Images, *Boon Yin Yin*.
- (2024) SAM-drive Semi-supervised Medical Image Segmentation Leveraging Consistency Regularization and Adalora Techniques, *Lei Yulin*.

Final Year Project

- (2023) Treadmill Monitoring System for Impaired Vision User using Face Detection, *Li Zhaodong*.
- (2023) Employee Attendance System using Facial Recognition with Liveness Detection, *Ho Zhi Yi*.
- (2023) Enhancing STEM Education with AI Driven Animated Visualizations, *Muhammad Waiz Wafiq Bin Mohamad Jafri*.

ADMINISTRATIVE DUTIES & PROFESSIONAL SERVICES

- (2024 - 2026) *International*, IEEE CertifAIEd Authorized Assessor
- (2023 - 2025) *University*, Graduate Employability Coordinator (FCSIT)
- (2024 - 2025) *University*, Pelaksanaan "AI for Nation"
- (2024 - 2025) *University*, Pembangunan Sistem eHR
- (2024 - 2025) *University*, Pemerkasan Kecerdasan Buatan UM (UMAI)
- (2024 - 2027) *University*, Working Group Infrastruktur Universiti Malaya Open Science
- (2023 - 2025) *Faculty*, Final Year Project Coordinator
- (2024) *International*, Robocup Malaysia Open (Team Mentor)
- (2022) *National*, UMhackathon Judge (Competition Reviewer)
- (2024) *National*, Interview (Temu Bual - Teknologi Ai Dalam Kreativiti dan Hobi)
- (2024) *National*, Simposium Emerging Technology (Invited Speaker)

WORKSHOP ATTENDED

- (2022) EMERALD Teaching and Learning (08 Aug 2022 - 12 Aug 2022)
- (2022) EMERALD Research And Supervision (16 Aug 2022 - 17 Aug 2022)
- (2023) Workshop: Responsible Conduct Of Research (01 Dec 2023 - 01 Dec 2023)
- (2023) HRD CORP Train The Trainer Certification Program (07 Mar 2023 - 11 Mar 2023)
- (2024) E-Learning Seminar: Micro-credential and Open-Distance Learning (25 Apr 2024 - 25 Apr 2024)
- (2024) MCMC AI Code of Ethics Workshop (11 Jul 2024 - 12 Jul 2024)
- (2024) Alibaba Cloud Academy Hands-on Training (4 Mar 2024 - 5 Mar 2024)
- (2024) NVIDIA FUNDAMENTAL OF DEEP LEARNING (12 Mar 2024 - 27 Mar 2024)
- (2024) IEEE CertifAIEd™ Assessor Training "The Mark of AI Ethics" (13 May 2024 - 17 May 2024)
- (2024) IEEE International Conference of Image Processing (27 Oct 2024 - 30 Oct 2024)