

# Win Kent Ong

Address: Batu Kawan, Penang 14100, Malaysia

Email: winkent2000@gmail.com

Telephone: +60 165611765

Nationality: Malaysian

[Google Scholar](#): Citations 61

[LinkedIn](#)

[Github](#)

## Education

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October 2023      **University of Malaya, Malaysia**  
- October 2025      **Master's of Computer Science (Research)**

Thesis Title:      Federated Feature Unlearning

Proposed a federated feature unlearning framework that enables privacy-preserving feature removal using only local client data. Introduced a novel feature sensitivity metric and demonstrated state-of-the-art performance in preserving model utility while ensuring robust and scalable unlearning, with results published at **NeurIPS 2024** and **MICCAI 2025 (Oral Presentation)**.

May 2019      **Tunku Abdul Rahman University and Management Technology, Malaysia**

- May 2023      **Bachelor of Mechatronics Engineering with Honours (CGPA: 3.5796/4.0)**

Thesis Title:      Deep Learning-Based Detection of Diseases in Oil Palm Trees

Developed a deep learning framework for early detection of Basal Stem Rot (BSR) disease in oil palm trees using UAV imagery, enabling timely intervention and yield protection. Advanced precision agriculture through AI and remote sensing, with results published in the top-tier journal **Computers and Electronics in Agriculture**.

## Scholarship and Awards

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2025	<b>MICCAI 2025 Travel Grant</b> Awarded by UM to support attendance at MICCAI 2025, Daejeon, South Korea.
2024	<b>NeurIPS 2024 Travel Grant</b> Awarded by UM to support attendance at NeurIPS 2024, Vancouver, Canada.
2023	<b>University of Malaya Scholarship Scheme</b> Independently authored a successful research proposal and awarded a fully funded Master's scholarship covering tuition and monthly stipend.
2023	<b>Best Thesis Award</b> Recognized with the Best Thesis Award among the Bachelor of Mechatronics Engineering graduating class of 2023.
2022	<b>President's List</b> Achieved President's List recognition twice for maintaining a GPA above 3.9.
2021	<b>Dean's List</b> Achieved Dean's List recognition twice for maintaining a GPA above 3.75.

## Publications

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**28<sup>th</sup> International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI 2025) Oral Presentation**

[Maverick: Collaboration-free Federated Unlearning for Medical Privacy](#)

WK Ong, CS Chan

**38<sup>th</sup> Annual Conference on Neural Information Processing Systems (NeurIPS 2024)**

[Ferrari: Federated Feature Unlearning via Optimizing Feature Sensitivity](#)

HL Gu\*, WK Ong\*, CS Chan, LX Fan (\* Equal Contribution)

**Computers and Electronics in Agriculture**

[Early symptom detection of basal stem rot disease in oil palm trees using a deep learning approach on UAV images](#)

**WK Ong**, WC Tan, LC Tay, WK Lai

**IEEE Transactions on Knowledge and Data Engineering**

[Ten challenging problems in federated foundation models](#)

T. Fan, HL Gu, XM Cao, CS Chan, ..., **WK Ong** et al.

**(Under Review) IEEE Transactions on Pattern Analysis and Machine Intelligence**

Feature Unlearning in Federated Learning via Feature Sensitivity Optimization

**WK Ong**, HL Gu, CS Chan, LX Fan

## Experience

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May 2025      **AI Engineer**

- Present      **MI Equipment Sdn Bhd**

- Developed algorithm for semiconductor defect dimension measurement.
- Built a semi-supervised method for defect segmentation and labelling.
- Designed a robust OCR algorithm for semiconductor inspection via adversarial training.
- Generated synthetic defects using diffusion models to enhance inspection robustness.

October 2023      **Research Assistant**

- May 2025      **Center of Image and Signal Processing Lab, University of Malaya, Malaysia**

- Researched Trustworthy AI with focus on fairness, robustness, and privacy.
- Led a team on Machine Unlearning, developing efficient algorithms.
- Involved in publications, grant writing, and PhD proposal preparation.
- Mentored undergraduate interns in coding and research.
- Contributed to publications and conference submissions.

## Research Skills

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### Deep Learning & Neural Networks

Strong foundation in deep learning, neural networks, and optimization methods.

### Computer Vision & Image Processing

Skilled in image analysis, object detection, and semantic segmentation.

### Trustworthy & Privacy-Preserving AI

Developed algorithms for privacy, fairness, and robustness in distributed ML.

### Applied AI Research

Applications in agriculture, medical, security, and privacy domains.

### Technical Proficiency

Python, C++, PyTorch, TensorFlow, OpenCV and scientific computing libraries.

### Language Proficiency

Proficient in English and Mandarin for technical and professional communication.

## Referees

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**Prof. Chee Seng Chan**  
(Master's Supervisor)

Faculty of Computer Science and Information Technology, University of  
Malaya, Malaysia  
cs.chan@um.edu.my

**Prof. Weng Kin Lai**  
(FYP Supervisor)

Faculty of Engineering and Technology, Tunku Abdul Rahman University  
and Management Technology, Malaysia  
laiwk@tarc.edu.my