

Wong Yen Hong

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EDUCATION

- **Multimedia University** Cyberjaya, Malaysia
Bachelor of Computer Science (Hons.), Data Science *Nov. 2022 – Present*
 - **CGPA: 3.93/4.00 (First Class Honours)**
 - Received the **Best FYP Award** in Data Science (1 / \approx 230).
 - Awarded with a merit scholarship for outstanding foundation result.
- **Multimedia University** Cyberjaya, Malaysia
Foundation in Information Technology *Jul. 2021 – Sep. 2022*
 - **CGPA: 3.94/4.00**

PUBLICATIONS

- **Yen-Hong Wong***, Lai-Kuan Wong. *AesCrop: Aesthetic-driven Cropping Guided by Composition*. In Proceedings of the Mobile Intelligent Photography & Imaging (MIPI) Workshop at the International Conference on Computer Vision (ICCV), Honolulu, Hawaii, 2025.

PROFESSIONAL EXPERIENCE

- **Grab** Petaling Jaya, Malaysia
Machine Learning Engineer Intern *Jul. 2025 – Nov. 2025*
 - Grab is a Southeast Asian superapp offering ride-hailing, food and grocery delivery, digital payments, and financial services through a single mobile platform serving millions across the region.
 - Spearheaded distributed training of the ETA model using Ray Train and Ray Data in a multi-node setup, achieving a 20 \times speedup and 85% GPU utilization.
 - Developed a scalable multi-node training framework for a metric forecasting model using Ray Train and Ray Data, reducing memory footprint by 80% via model sharding and activation checkpointing.
 - Developed an in-house LLaMa-Factory for out-of-the-box LLM and VLM fine-tuning, with support for Ray, custom S3 artifact paths, and internal authentication.
 - Migrated and rolled out Airflow operators to production instances using feature flags to ensure a seamless user experience.
 - Developed parallel multi-architecture support for container image building in the ML platform, enhancing compatibility and deployment flexibility.
- **Multimedia University** Cyberjaya, Malaysia
Undergraduate Researcher *Nov. 2024 – July 2025*
 - Conducted undergraduate research on aesthetic-driven automatic image cropping for a Final Year Project under the supervision of Associate Professor Dr. Wong Lai Kuan in the Visual Processing (ViPr) Lab.
 - Proposed a state-of-the-art hybrid image cropping framework guided by compositional principles, and performed extensive experiments and analyses to evaluate its effectiveness.
 - Published a workshop paper at the top-tier computer vision conference ICCV.
- **MoneyLion** Kuala Lumpur, Malaysia
Data Science Intern *Jul. 2024 – Oct. 2024*
 - MoneyLion is a U.S.-based financial technology company offering digital banking, investment, and lending services designed to help users manage their personal finances.
 - Enhanced the performance of the transaction categorizer in long-tail categories.
 - Designed and implemented an on-demand rule injection pipeline that leverages clustering algorithms, large language models, and graph traversal techniques to auto-generate deterministic rules, facilitating the labeling of ground truths and improving model accuracy.
 - Generated 582 deterministic rules that curated approximately 14,000 ground truths in long-tail categories, increasing model's accuracy by 30% in categorizing these new ground truths.
 - Optimized the execution time of a Metaflow pipeline by 4x, reducing processing time from 8 minutes to 2 minutes by enhancing query efficiency and leveraging parallel processing.

CONFERENCES & SUMMER SCHOOLS

- **International Conference on Computer Vision (ICCV) 2025** Honolulu, Hawaii
 - Five-day academic conference for advances in computer vision, artificial intelligence, and pattern recognition.
 - Received a scholarship through the Broadening Participation Program to attend as one of the few undergraduate authors.
 - Participated in tutorials, workshops, oral presentations, keynotes, and poster sessions covering a wide range of cutting-edge computer vision research.
- **Oxford Machine Learning Summer School (OxML) 2025** Oxford, United Kingdom
 - Four-day machine learning bootcamp that brings together leading experts to deliver a curriculum covering cutting-edge machine learning theory and industry applications.
 - Awarded a student scholarship to attend the *MLx Representation Learning & Generative AI* Track at the University of Oxford's Mathematical Institute as one of the few undergraduate participants.
 - Explored representation learning across domains (robotics, time series, and computer vision), along with large language models and generative models.

PROJECTS

- **MakanLah**
 - Local food education app featuring MLOps pipelines, with 1,300+ likes on LinkedIn and 40+ stars on GitHub.
 - Trained a food classification model using MobileNetV2 with Outlier Exposure, achieving 90% accuracy on in-distribution examples and 92% accuracy on differentiating out-of-distribution examples.
 - Collected and curated a dataset of 30 food categories, with an average of 70 high-quality images per class.
 - Developed a script to generate synthetic adversarial examples, improving model robustness.
 - Built an end-to-end MLOps pipeline on Kubernetes (EKS), including a model registry (MLflow), distributed training cluster (Ray Train), serving infrastructure (Ray Serve), and workflow orchestrator (Metaflow).
 - Implemented a feedback loop system to automatically trigger model retraining based on user input, ensuring continuous improvement.
 - Designed and implemented the MakanLah App and MakanLah API.
 - **Tech Stack:** PyTorch, OpenCV, Terraform, AWS EKS, Ray, Metaflow, AWS S3, AWS RDS, React.js, Node.js, Express.js, JavaScript, Python
- **What If I Never Brick**
 - Codeforces optimal rating calculator based on ideal performance, with 400+ upvotes on Codeforces.
 - Implemented a greedy algorithm along with the ELO rating algorithms to compute the optimal rating.
 - Designed and implemented an interface to allow users to interact with the application.
 - **Tech Stack:** React.js, Redux, JavaScript, HTML, CSS, Git

HONORS AND AWARDS

- **Codeforces:** Ranked top 4% of users on the world's largest competitive programming platform.
- **Meta Hacker Cup 2023:** Secured top 4% in Round 1 (824 / \approx 20,000).
- **Final Year Project:** Received the Best Project Award in Data Science (1 / \approx 230).
- **Programming League National 2025:** Secured 2nd place among 100+ teams.
- **Programming League National 2024:** Secured 1st place among 70+ teams.
- **Programming League National 2023:** Earned 3rd place among 60+ teams.
- **Monash Coding League 2024:** Secured 1st place among 80+ teams.
- **Monash Coding League 2023:** Won 1st place among 70+ teams.
- **CodeNecton 2022:** Achieved 2nd place among 100+ teams.
- **CodeNecton 2021:** Achieved 1st place in closed category among 30+ teams.
- **ImagineHack 2024:** Earned Best Innovation Award.
- **Data Science Digital Race 2024:** Won 1st place among 100+ teams.

TECHNICAL SKILLS

- **Languages and frameworks:** Python (PyTorch, TensorFlow, Ray, Metaflow, Pandas, FastAPI, OpenCV), JavaScript (TypeScript, React.js, Redux, Next.js, React Native, Express.js), HTML, CSS, MongoDB, PostgreSQL, Redis, C++, Java
- **CI/CD, Cloud & Tools:** AWS, Terraform, Kubernetes, Docker, GitHub, GitHub Actions

VOLUNTEERING

- **CodeNecton 2024:** Advisor & Problem Author
- **CodeNecton 2023:** Competition Lead & Problem Author & Workshop Speaker
- **Programming League National 2025:** Workshop Speaker
- **FCI JumpStart 2024:** Guest Speaker
- **IT Society MMU 2023:** Technical Team
- **MMU Cybertron 2024:** Computer Vision Team
- **Hackerspace MMU:** Active Member