

Wong Yen Hong

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EDUCATION

Multimedia University

- *Bachelor of Computer Science; CGPA: 3.98/4.00*
Foundation in Information Technology; CGPA: 3.94/4.00

Cyberjaya, Malaysia

Nov. 2022 – Present

Jul. 2021 – Sep. 2022

EXPERIENCE

MoneyLion

- *Data Scientist Intern*

Kuala Lumpur, Malaysia

Jul. 2024 – Present

- MoneyLion is a U.S.-based financial technology company offering digital banking, investment, and lending services designed to help users manage their personal finances.
- Assigned to enhance the performance of an in-house transaction categorizer, specifically in long-tail transaction 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.
- Implemented a DAG workflow in Airflow to run a dbt script that refreshes a Snowflake table weekly, ensuring data freshness.

CodeNecton 2023

- *Head of Competition Division*

Cyberjaya, Malaysia

Sep. 2023 – Dec. 2023

- CodeNecton 2023 is one of the largest competitive programming events for university students in Malaysia.
- Led a team of 5 members to create over 20 algorithmic problems that covered topics such as Dynamic Programming, Number Theory, Graph Algorithms and Greedy Algorithms.
- Developed robust test cases using testlib.h for each problem shortlisted in the problem set.
- Composed problems and editorials using LaTeX on Overleaf.
- Conducted 2 workshops to prepare over 200 participants for the upcoming rounds.

PROJECTS

• InventoorAI

- A warehouse monitoring system that served as an ERP solution in ImagineHack 2024.
- Trained a YOLO model to enable an autonomous robot to navigate to objects and monitor the warehouse inventory.
- Implemented WebSocket on a server to facilitate communication between a Raspberry Pi and the server.
- Developed an LLM agent that parses natural language into commands to control the robot.
- Designed and implemented a user-friendly web application using Next.js.
- **Tech Stack:** React, YOLO, LangChain, OpenCV, FastAPI, Python

• Sudoku Mobile

- A sudoku mobile app with sudoku image recognition and sudoku solver.
- Implemented an algorithm based on contours that extracts the sudoku puzzle using OpenCV.
- Implemented a CNN based on the LeNet-5 architecture to recognize handwritten digits, achieving 99.82% accuracy on the MNIST dataset.
- Containerized and deployed the sudoku recognition API using Docker and AWS ECS & ECR.
- Implemented a CI/CD pipeline to enable fast-paced development for the API.
- Designed and implemented a backtracking sudoku solver algorithm.
- Designed and implemented a user-friendly mobile app using React Native.

- **Tech Stack:** React Native, OpenCV, PyTorch, Flask, Pytest, GitHub Actions, AWS ECS & ECR, Docker, TypeScript, Python
- **Snake Game AI**
 - A snake game agent that was trained using Reinforcement Learning with Deep Q Network.
 - **Tech Stack:** PyTorch, Python
- **Neural Network From Scratch**
 - A neural network with a fully connected layer and auto-backpropagation, implemented from scratch.
 - **Tech Stack:** Python, NumPy
- **What If I Never Brick**
 - A web application that computes the optimal rating of a user on Codeforces. It currently has more than 400 upvotes on Codeforces, making it one of the most highly upvoted web applications on Codeforces.
 - Implemented a greedy algorithm along with the ELO rating algorithms to compute the optimal rating.
 - **Tech Stack:** React.js, Redux, JavaScript, HTML, CSS, Git

HONORS & AWARDS

- **Codeforces - Candidate master (97th percentile):** Competitive programming platform with more than 2 million users.
- **ImagineHack 2024 - Best Innovation Award:** 48-hour Gen-AI hackathon focused on solving challenges such as financial literacy, the startup ecosystem, and enterprise resource planning.
- **Programming League National 2024 - Champion:** National inter-university competitive programming competition by PEKOM at University of Malaya.
- **Monash Coding League 2024 Semester 1 & 2 - Champion:** National inter-university competitive programming competition by Monash's School of IT at Monash University Malaysia.
- **Monash Coding League 2023 Semester 1 & 2 - Champion:** National inter-university competitive programming competition by Monash's School of IT at Monash University Malaysia.
- **Programming League National 2023 - 2nd Runner Up:** National inter-university competitive programming competition by PEKOM at University of Malaya.
- **CodeNecton 2022 - 1st Runner Up:** National inter-university competitive programming competition by IT Society of MMU at Multimedia University.

TECHNICAL SKILLS

- **Language:** C++, JavaScript, TypeScript, Python, HTML, CSS, Java
- **Web Frameworks:** React.js, Next.js, React Native, Chakra-UI, Node.js, Express.js, Nest.js, Socket.IO
- **ML Frameworks:** TensorFlow, PyTorch
- **Database:** PostgreSQL, MongoDB
- **DevOps:** AWS, Metaflow, Docker, GitHub, GitHub Actions
- **Version Control:** Git