

Lee Jia Wei, Shawn

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Skills

Languages: Python (PyTorch, TensorFlow, Keras, scikit-learn, NumPy, PIL, OpenCV), SQL, JavaScript

Certifications: AWS Certified Cloud Practitioner, Professional Scrum Master I (Agile)

Work Experience

AI Engineer Intern, Defence Science and Technology Agency

Feb 2024 - Apr 2024

- Developed an image inpainting detection application, achieving a 72.1% accuracy by implementing image segmentation architectures in PyTorch and training on an A100 GPU
- Researched novel model architectures and image forensics, reviewing 22 research papers and conducting 56 experiments with different model configurations
- Deployed a web interface to the cloud by packaging the application as a Docker container

Data Analyst Intern, Ministry of Home Affairs

Mar 2023 - Apr 2023

- Improved reporting performance, reducing the loading time by 10x by building an interactive dashboard in Power BI to replace the slow and memory-intensive Excel spreadsheets
- Identified a critical bottleneck that caused delays in 47% of projects by analysing data collected from 4675 projects spanning 9 different divisions
- Presented findings to the director of the resource planning team and received positive feedback

Data Entry, Fairmont Hotel Singapore

May 2022 - Feb 2023

- Processed reservation requests and changes, entering up to 600 bookings each month into the OPERA reservation system, which translates to \$300,000 in monthly revenue
- Increased the number of reservations processed per day 5x and reduced errors by 95% by automating room bookings using macros and Python scripts

Education

Diploma in Data Science, Ngee Ann Polytechnic

Apr 2022 - Apr 2025 (Expected)

GPA: 3.9/4.0, Awarded NP Scholarship and Director's List

Coursework: Deep Learning (Computer Vision, NLP), Cloud Technologies (S3, Lambda, DynamoDB)

Projects

image2coloringbook, github.com/ShawnLJW/image2coloringbook

- Built a web application to generate a colouring book from an uploaded picture using OpenCV for image processing and K-means clustering from scikit-learn for image segmentation

harry-GPTter, github.com/ShawnLJW/harry-GPTter

- Implemented a transformer-based generative language model with 56M parameters in PyTorch and trained it on text from all 7 Harry Potter books

Co-Curricular Activities & Community Service

Vice President, NP Artificial Intelligence Special Interest Group

Aug 2023 - Present

- Oversaw the planning of schoolwide events, such as workshops on popular machine learning algorithms, and supported nationwide events, such as the Singapore Fintech Festival 2023
- Collaborated with AI Singapore, a national programme in AI, to organise school-wide events to showcase unique AI applications and promote AI literacy among students

IT Specialist, Heartwarmers Volunteer Group

Jun 2022 - Present

- Developed Google Chrome extension integrated with point of sale system to calculate and apply discounts automatically, speeding up as much as 300 transactions per day
- Managed network and IT infrastructure of the monthly pop-up supermarkets and provided technical support and troubleshooting throughout the events

Treasurer, NP FoodAID Club

May 2022 - Mar 2024

- Executed a t-shirt sales campaign to fund club activities and analysed sales data from previous years to optimise marketing efforts and boost sales, generating \$1,500 in revenue
- Organised over 20 community service projects, receiving positive feedback from participants with a net promoter score of 45, indicating a high level of volunteer satisfaction

Achievements

Fake News Detection Hackathon (SeeTrue DSTA Brainhack 2023)

- Won 2nd place out of 31 teams, using convolutional neural networks (CNN) and XGBoost to solve computer vision and NLP classification tasks with a combined accuracy of 86.3%

National Olympiad in Informatics (NOI) 2021

- Selected as one of 3 students to represent Commonwealth Secondary School in a nationwide programming competition organised by the National University of Singapore (NUS)