LIM SHAO KIAT

shaokiat@gmail.com | Portfolio Website | GitHub | LinkedIn

EXPERIENCE

Micron Semiconductor Asia, *Data Scientist, Singapore*   *Jul 2023 – Present*
- Led a 6-member project team to design and deploy a computer vision video analytics solution (object detection & anomaly detection) for the photolithography process, delivering a projected USD 50M business value over 3 years.
- Solved **rare-defect data scarcity** by combining automated labeling pipelines with **synthetic defect generation (Nano Banana)**, improving anomaly detection robustness and model iteration speed.
- Delivered measurable operational impact through **Predictive Maintenance ML**, reducing unplanned downtime and improving manufacturing availability, resulting in **~USD 5M cost savings**.
- Owned the **end-to-end ML lifecycle on GCP**—data ingestion, EDA, feature engineering, model training, validation, and deployment—integrating AI seamlessly into existing manufacturing workflows.
- Designed and deployed **IoT edge monitoring solutions** for low-latency data capture in manufacturing environments, managing fleet-scale rollouts on **Linux** using **Ansible**, and enabling reliable real-time data ingestion for downstream ML pipelines.

Angsana Technology, *Software Engineer, Singapore*   *Aug 2022 – Jul 2023*
- Collaborated as part of the core development team to build and deliver a project aligned with Maritime and Port Authority Singapore (MPA) specifications, facilitating the **digitalization of bunkering operations**. *(TypeScript, Python)*
- Spearheaded the implementation of a continuous integration pipeline, automating API and end-to-end tests using GitHub Actions to ensure seamless code commits. *(DevOps, GitHub Actions, Playwright)*

SKILLS

Languages
English · Chinese
Programming Languages
Python · JavaScript · TypeScript · SQL · HTML · CSS
Libraries and Frameworks
Pandas · Numpy · scikit-learn · OpenCV · Ultralytics · NodeJS
Data Engineering & Cloud
Google Cloud Platforms (BigQuery, VertexAI, CloudStorage, CloudRun) · Docker · Ansible · Linux

PROJECTS

Similarity Search with RAG | *BERT and Vectorstore*   *Sept 2024 – Dec 2024*
- Implemented a **Retrieval-Augmented Generation (RAG)** system using **BERT embeddings and FAISS**, enabling semantic search and question answering over structured and unstructured blog content.
- Performed data preprocessing, embedding evaluation, and iterative experimentation to improve retrieval relevance. *(Python, Hugging Face)*

Shao Kiat's Blog | *Self-hosted Blog*   *Apr 2022 – Present*
- Designed and self-hosted a technical blog using **Docusaurus**, covering topics such as **AI, Web3 fundamentals, and data-driven systems**.
- Regularly translate complex technical concepts into clear, beginner-friendly explanations, demonstrating strong written communication skills.

EDUCATION

National University of Singapore
Bachelor of Computing in **Computer Science**, *Second Class (Upper) Honors*

CERTIFICATIONS

Coursera
- Smart Analytics, Machine Learning, and AI on Google Cloud – *Issued: Aug 2023*
- Google Cloud Fundamentals: Core Infrastructure – *Issued: Aug 2023*

LEADERSHIP EXPERIENCE & ACTIVITIES

Micron Transport Committee, *Sub-Committee Member*   *Jul 2023 – Present*
- Actively participated in the planning and facilitation of company transport logistics, ensuring smooth transportation services for over 2,000 employees.