IAN YAP

Data Scientist
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PROJECTS

Portfolio Website: https://xiyap.github.io/ (for more projects and info)

Insurance Charges Prediction [EDA + Regression]

- Conducted detailed analysis on dataset and utilized DL and ML algorithms to forecast medical cost.
- Utilized: Pandas, Numpy, Matplotlib, Seaborn, Scikit-Learn, XGBoost, TensorFlow, Keras, MLflow

Bank Transaction Classification [EDA + Multimodal Classification]

- Performed comprehensive analysis on data to identify transactional patterns and filter clients for targeted product recommendations based on specific metrics.
- Multimodal classification model utilizing structured and text data achieves 96% accuracy.
- Utilized: Pandas, Numpy, Matplotlib, Seaborn, Scikit-Learn, XGBoost, LightGBM, MLflow

Segregated Object Counting Pipeline [Object Detection + Tracking + Counting]

- Developed 'trackerYOLO' module, enabling rapid inferencing of object tracking and counting applications via YOLO-based models with customizable tracking parameters and UI elements.
- Utilized: OpenCV, CVZone, YOLOv8

Pneumonia X-Ray Classifier [Image Classification + Web Deployment]

- Deployed a custom CNN model online which detects pneumonia from chest X-rays with 99% recall.
- Utilized: CNN, Tensorflow, Keras, Transfer Learning, Streamlit

Text Sentiment Analysis [NLP Classification + BERT LLM]

- Fine-tuned DistilBERT LLM model in native PyTorch to predict sentiments of user posts on Twitter.
- Utilized: NLP, HuggingFace, LLM, PyTorch, Scikit-Learn, Pandas

PROFESSIONAL EXPERIENCE

Upskilling (Machine Learning/Data Science/Deep Learning) 09/2023 – Present

- Pursued professional courses and conducted projects in related domains, applying theoretical knowledge gained to real-world scenarios to further enhance practical skills and knowledge.
- Developed portfolio website using HTML for project showcase.

Top Glove Corporation Bhd., Klang, Selangor 12/2019 – 08/2023

AI & Automation Researcher (Digitalization & Automation Team)

- Lead engineer of breakthrough patented project (PI2023003018), producing an automation machine yielding an opportunity gain of RM7.7 million annually per factory, with ROI of 2.6 months.
- Drive POC projects with machine learning solutions such as leveraging YOLOv8 algorithm for glove defect detection and glove positioning detection solutions.
- Additional role as Associate Engineer to the Engineering Consultant, addressing company wide engineering challenges by utilizing data-driven insights to implement solutions.
- Utilized PowerBI to perform data analysis and cost-benefit assessment to identify strategic engineering project opportunities, with focus on managing stakeholders' interests to secure buy-in.
- Coordinated cross-functional teams to ensure alignment with direction and goals of project.
- Led teams of 7 engineers and 6 workers, ensuring streamlined project progress.
- Conducted SolidWorks training to a cohort of 90 personnel, alleviating department workload.

EDUCATION

University of Nottingham, Semenyih, Selangor 2019

MEng (Hons) of Mechatronic Engineering

- Graduated First Class Honours / 4.0 CGPA

SKILLS

Python (Pandas, Numpy, Matplotlib, Seaborn, Scikit-learn, Tensorflow, Keras, PyTorch, OpenCV, YOLO)
Machine Learning (Regression, Classification, Clustering), **Deep Learning** (Computer Vision, NLP, LLM)
MLflow, Streamlit, EDA, Data Wrangling, Tableau, PowerBI, GitHub, SQL, Project Management