M FIRDAUS M FAUZI

Microsoft Certified Data & AI Engineer | Google Certified in Project Management
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Former Oil & Gas operations and process safety practitioner turned Digital, Data & AI Transformation professional driven by a personal mission to design & develop scalable AI-driven solutions that enhance enterprise efficiency and ensure compliance by leveraging a strong engineering, safety, and operational excellence background.

PROFESSIONAL EXPERIENCE

Arvato Systems Malaysia
Sr. Machine Learning Consultant
Feb 2025 - Present

Responsible as a Technical advisor as well as an implementation resource for the implementation of AI & Machine Learning features into digital products/solutions.

Aventra Group Sdn. Bhd.
Lead, AI & ML Engineering
Jun 2023 - Feb 2025

Managing a multinational team of AI & ML engineers in designing scalable AI solutions, serving as Solution Architect for rapid MVP development and RFP responses.

Astoria Solutions Sdn. Bhd.
Sr. Software Engineer
Oct 2022 - Jun 2023

Leading a multinational team in developing autonomous workplace safety solutions using computer vision, enhancing safety monitoring capabilities.

PETRONAS Carigali Sdn Bhd
Sr. Executive (Safety)
Jan 2019 - Oct 2022

Leveraged data science and software development skills to create machine learning & AI models to augment routine safety processes and requests.

PETRONAS Carigali Sdn Bhd
Executive (Emergency Response)
Sept 2015 - Jan 2019

Leveraged software development skills to create simple desktop applications to streamline routine task and processes.

EDUCATION & CERTIFICATION

- Azure Databricks Platform Architect
- Microsoft Certified Azure Artificial Intelligence (AI) Engineer
- Microsoft Certified Azure Data Engineer
- Google Certification in Project Management
- Professional Certificate on Data Science (Machine Learning), Harvard X
- Bachelors of Engineering (Honours) in Chemical Engineering, Universiti Teknologi PETRONAS

PROJECTS

Agentic Personal Finance Analytics
[Python, LangChain, Databricks (Lakebase), React, Azure App Service]
An AI-enabled finance analytics platform that scrapes through uploaded transaction statements, performs reconciliation to ensure accuracy, and visualizes the data into dashboards.

ML - Effort Estimation & Task Clustering
[Python, Databricks, MLFlow, PySpark, FastAPI]
An end-to-end data engineering and machine learning implementation for Clustering and Regression (deep learning) model predicting the probability distribution of how long a task is estimated to complete.

Self-Hosted Agent Meta-Harness
[Python, Databricks, Docker, Azure App Service, PostgreSQL]
Configuration and deployment of a self-hosted agent meta-harness that runs long-lived coding & research agents on private infrastructure, orchestrating multiple model runtimes, MCP tool servers and sandboxed execution workspaces behind a single authenticated control plane with full data residency.

Realtime Data Simulation Platform

[Python, MQTT, FastAPI, Docker]

Development of a platform that simulates real-time data scenarios allowing aspiring data practitioners to practice their data engineering and data science skills in a psuedo-realistic environment.

Agentic AI - HSEzy (AI Agent for HSE Management)

[Python, LangChain, FastAPI, PostgreSQL, Docker]

Development of AI agent with tools for managing health and safety capable of performing HAZID, BOWTIE, Tripod Beta Investigation, Autonomous Compliance Assurance and crawling for HSE Lesson Learn from public sources.

Agentic AI - Analytical Agent for Pharmaceutical Industry

[Python, LangChain, FastAPI, PostgreSQL, Docker]

Development of AI agent with analytical toolkits tailored for pharmaceutical industry.

Multivariate Time Series Anomaly Detection

[Python, PyTorch, Databricks, MLFlow, Scikit-Learn, FastAPI, Docker]

Deep Learning (VAE-based) model & MLOps (Databricks) implementation for multivariate anomaly detection through curve reconstruction for pharmaceutical medicine production.

Computer Vision - Deep Fake Fraud Detection in Insurance Claims

[Python, PyTorch, MLFlow, FastAPI, Docker]

Multimodal computer vision model development (including both Vision Transformer and CNN based architectures) deployed to analyze images for potential deep fake generation / manipulation

Computer Vision - Retail Self-checkout System

[Python, PyTorch, FastAPI, Open-CV, React]

A computer-vision model deployed via realtime websocket connection to enable a self service checkout system for retail store installation.

MLOps : Private Hosted MLOps Server

[MLFlow, Blob Storage, Azure SQL, Docker, Azure App Service]

Configuration and deployment of a private hosted MLOps server for data science teams collaboration, experiment tracking and model registry.

Intelligent Triaging Systems

[Azure Machine Learning, Scikit-Learn, NLTK, Python, FastAPI, Azure App Service, Application Insights]

Deployment of triaging classification models to route incoming case management towards the right resolver group.

Product Recommendation Systems

[Python, Open-CV, Azure AI Vision, Azure AI Foundry, Azure App Service, FastAPI, React, Docker]

Use of computer vision models and image comparison algorithms to fetch most relevant product from catalog based on user's preference.

Enterprise AI Studio: AI Centre of Excellence Platform (PaaS)

[Python, Flask, Docker, Azure ARM Templates, Azure DevOps, Azure Pipelines, Microsoft Power Apps]

An AI Centre of Excellence (COE) PaaS designed for rapid deployment of custom AI packages to production. The platform automates infrastructure setup, allowing the development team to focus on user-specific customization.

Intelligent Document Processing (IDP)

[Python, Flask, React, Docker, Azure Container Registry, Logic Apps, Azure Document Intelligence, CosmosDB, Azure App Service]

Developed an Intelligent Document Processing (IDP) solution for automated invoice processing to extract key invoice entities, enhancing data accuracy, hence streamlining financial workflows across the enterprise.

Intelligent Compliance Assurance

[Python, Flask, React, Docker, Azure Container Registry, Azure OpenAI, Azure blob Storage, Azure AI Search, Azure Document Intelligence, CosmosDB, Azure App Service]

A generative AI solution designed with retrieval augmented generation (RAG) that automate compliance evaluation against standards, rules, and regulations by analyzing an evidence repository to reduce governance burden of performing audits or compliance check.

Enterprise Intelligent Chat

[Python, Flask, React, Azure OpenAI, Azure AI Search, CosmosDB]

A Q&A; generative AI solution providing 24/7 real-time automated conversational support. Capable of providing answers from both structured database (Text-to-SQL) & unstructured database (RAG).

Intelligent Contract Management - Maritime Contracts

[Python, Flask, React, Azure OpenAI, Azure AI Search, Azure Document Intelligence, CosmosDB, Azure App Service]

A generative AI solution with hybrid search (vector + keyword) that enables real-time Q&A;, contract clause extraction, obligation tracking, and automated compliance analysis for maritime contracts.

Maritime Vessels Fuel-Speed & Emission Simulation

[Python, Flask, React, Docker, PowerBI]

A digital twin solution for maritime vessel fleet operations capable of simulating fuel consumption & emission data during planning stage that enables data-driven ESG decision making.

Computer Vision - PPE Compliance & Safety Detection

[Python, PyTorch, Angular, Azure Machine Learning]

Object detection model layered on top of video monitoring systems capable of evaluating PPE compliance, workers unsafe behaviour & unsafe work conditions.