

Muhammad Ilham Bin Noor Effendy

Aspiring Data Engineer | Early careers in Oil & Gas, IT & Manufacturing

Contact no.: +60197227626 Email: muhdilham2001@gmail.com LinkedIn: [Muhammad Ilham Effendy](#)

Early-Career Data Engineer in Oil and Gas with hands-on experience in **ETL automation**, **API integration** and **data compliance validation** within enterprise environments. Strong **Python scripting** background with experience in **structured data processing**, **REST API ingestion** and **Power BI dashboard development**. Currently working in **system-level testing and debugging** at Sony with exposure to production environments, **Linux CLI** and **defect lifecycle management**. **Microsoft Certified** (Azure & Power BI) with solid foundations in **machine learning** and **data systems**.

SKILLS

- **Python:** Proficient in developing comprehensive ETL workflows, integrating REST APIs for data ingestion and automating master data compliance validation to significantly reduce manual verification efforts.
- **Data Engineering & Architecture:** Adept at extracting, transforming and loading complex datasets to align with strict enterprise frameworks (such as OSDU standards) for improved data quality and structured analytical reporting.
- **Linux CLI & Debugging:** Skilled in utilizing command-line tools (such as Tera Term) for deep-level system diagnostics, log capture, patch validation and root-cause debugging of high-impact software defects.
- **Software Testing & QA:** Experienced in executing rigorous smoke and regression testing cycles, performing system-level validation on Android TV platforms and managing the complete defect lifecycle using tools like JIRA and TestRail.
- **Dataiku:** Hands-on experience leveraging Dataiku in tandem with Python scripts to automate data workflows and streamline complex compliance tasks within enterprise environments.

CERTIFICATION

- Core Designer, ML Practitioner & Advanced Designer by **Dataiku** Oct-2024
 - **Data Preparation:** Skilled in using Dataiku DSS to clean, join and transform raw datasets into analysis-ready formats.
 - **Visual Machine Learning:** Trained in building and training machine learning models (Classification & Regression) using visual tools and automated features.
 - **Workflow Automation:** Understands how to build automated data flows and scenarios to streamline repetitive data tasks.
 - **Data Visualization:** Created charts and dashboards within Dataiku to present data findings and model results clearly.

- Power BI Data Analyst Associate by **Microsoft** Feb-2025
 - **Data Ingestion:** Experienced in connecting to various data sources and using Power Query to clean and shape data for reporting.
 - **DAX Foundations:** Capable of writing basic to intermediate DAX formulas for calculated columns and measures.
 - **Report Design:** Designed interactive dashboards using standard visuals (charts, maps, slicers) to make data easy to understand.
 - **Data Sharing:** Knowledgeable in publishing reports to the Power BI Service and setting up basic data refreshes.
- Azure Data Fundamentals by **Microsoft** Feb-2025
 - **Cloud Basics:** Solid understanding of how data is stored and managed in the cloud compared to traditional on-premises systems.
 - **Azure Data Storage:** Familiar with the basics of Azure SQL Database (Relational) and Azure Blob Storage (Non-relational).
 - **Data Analytics in Azure:** Introduction to how large-scale data is processed using tools like Azure Synapse Analytics.
 - **Security & Privacy:** Understands the fundamental concepts of data security and privacy within the Microsoft Azure environment.

EXPERIENCE

- Sony – **Design Engineer System Software** Aug 2025 - Current
 - **System-Level Validation:** Performed comprehensive validation testing on Android TV platforms, ensuring stable media playback across major applications (Netflix, YouTube, Prime Video).
 - **Firmware Stability:** Executed smoke and regression testing cycles to validate firmware stability and performance prior to official release.
 - **Linux & Debugging:** Diagnosed system-level defects using Linux CLI and Tera Term, performing log capture, patch validation and root-cause debugging.
 - **Defect Management:** Managed and tracked software defects using JIRA and TestRail, ensuring reproducible issue documentation and efficient resolution cycles.
 - **Production Support:** Contributed to system stability by identifying and escalating high-impact performance defects.

- Schlumberger – **Data Engineer Intern** Oct 2024 – Feb 2025
 - **ETL Automation:** Developed Python-based ETL scripts to automate the extraction, transformation and loading of wellbore and trajectory datasets aligned with OSDU data standards.
 - **API Integration:** Integrated REST APIs for data ingestion and version updates via the Developer Portal.
 - **Compliance Automation:** Automated master data compliance validation using Python and Dataiku reducing manual verification efforts.
 - **Data Structuring:** Categorized and structured non-compliant records for analytical reporting and visualization.
 - **Reporting & Visualization:** Designed Power BI dashboards to monitor compliance metrics and data quality indicators.
- Sony – **IT Support Intern** Sep 2021 - Feb 2022
 - **Workstation Support:** Provided comprehensive hardware and software support, including PC formatting, software installation and new laptop configurations.
 - **Network Maintenance:** Assisted in network monitoring and troubleshooting tasks; actively participated in internal network project activities.
 - **Security & Compliance:** Supported the compliance team in managing virus mitigation cases, conducting system audits and preparing technical reports.
 - **Helpdesk Services:** Offered technical assistance for Office 365 reinstallation and resolved common hardware/software issues for end-users.

PROJECT & RESEARCH

- **Final Year Project: Student Academic Performance Prediction** Oct 2023 – Aug 2024
 - **Predictive Modeling:** Developed a machine learning system to assess secondary school performance using factors like study time, previous grades and parental education.
 - **Data Engineering:** Integrated and preprocessed open-source datasets, handling missing values and categorical transformations; applied **SelectKBest** for feature selection.
 - **Algorithm Evaluation:** Utilized **SVM, BPNN, and KNN** to evaluate performance; achieved a peak accuracy of **92.0%** using the **SVM classifier**.
 - **Deployment:** Built and deployed an interactive prediction prototype using the **Streamlit** framework for real-time data input and results.
- **Deep Learning Project: Tomato Leaf Disease Detection** Oct 2023 – Aug 2024
 - **Computer Vision:** Developed a system to classify tomato leaf diseases across 25,000+ annotated images using **PyTorch**.
 - **Model Architecture:** Implemented and fine-tuned a **ResNet18** model with ImageNet pre-trained weights; applied data augmentation (flipping, cropping) to increase robustness.
 - **Performance:** Achieved **99.4% test accuracy** through hyperparameter tuning and early stopping to prevent overfitting.

- **Web Integration:** Deployed the trained model into a user-friendly **Streamlit** web application for real-time, image-based disease diagnosis.
- **IoT Project: Smart Pet Feeder** Oct 2023 - Aug 2024
 - **Hardware Integration:** Designed an automated feeding system using **Arduino UNO**, integrating IR motion sensors and ultrasonic sensors for food level monitoring.
 - **Automation Logic:** Programmed servo motors for automated dispensing and implemented real-time container level tracking.
 - **Cloud Connectivity:** Developed a mobile interface and push-notification system using the **Blynk IoT platform** to alert users when food levels were low.
 - **Prototyping & Debugging:** Managed full circuit wiring and resolved hardware challenges involving sensor pin mismatches and network configuration.

EDUCATION

- Bachelor Of Information Systems (Hons.) Intelligent Systems Engineering 2025
- Diploma Computer Science 2022

TECHNICAL SKILLS

- **Programming:** Python (Pandas, NumPy, PyTorch), C++ (Arduino), Linux CLI (Tera Term, ADB).
- **Data & AI:** ETL Automation, REST API Integration, Machine Learning (SVM, CNN, ResNet18), Dataiku DSS.
- **Tools:** Power BI, JIRA, TestRail, Git, Streamlit, Blynk IoT
- **Testing:** System-Level Validation, Smoke & Regression Testing, Firmware Debugging.

REFERENCES

Norliza Abdul Rahman
 Industrial training Manager
 Email: nrahman2@slb.com