

# FAWZI LINGGO S.T.

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## OBJECTIVE

I am currently working as a Data Engineer with a strong focus on data processing across streaming, messaging, and batch systems, including the implementation of Change Data Capture (CDC) techniques. I have hands-on experience with PostgreSQL as an RDBMS, Apache Kafka for streaming, ActiveMQ for messaging, and the Hasura platform for building GraphQL APIs.

In addition, I have a strong interest in backend service development related to data systems. I use Golang to build RESTful APIs and gRPC services, and Java for developing streaming applications. To improve REST service performance, I implement Redis for caching, which has also strengthened my experience with Docker and Kubernetes for containerization and orchestration.

Within enterprise data platforms, I am experienced in operating and managing Confluent and Qlik products, including Replicate, Compose, Enterprise Manager, and Sense. As a Confluent Developer, I am committed to continuously expanding my expertise in designing, building, and scaling real-time data pipelines, stream processing systems, and event-driven architectures.

## EXPERIENCE

**PT All Data International** | West Jakarta, Jakarta, Indonesia

*Data Engineering (Jun 2023 – present)*

Full Time

- Since taking on the role of a Data Engineer, I have gained significant experience in Change Data Capture integrated with streaming platforms such as Kafka, with a primary focus on utilizing Confluent. Over the course of 4 months, I have successfully completed two significant projects as a Data Engineer, one in the banking sector and the other in the insurance industry.
  - In the banking sector, my responsibilities included replicating data from the AS400 core banking system to Kafka and Oracle using Qlik Replicate. Subsequently, I performed data processing to meet the specific business requirements.
  - Within the insurance industry, I was tasked with replicating data from the production OLTP environment to a data lake, where stored procedures were implemented. The data lake employed for this purpose was the Cloudera Data Platform. The data replication process itself was carried out using Qlik Replicate and Compose.
  - Consolidated and enhanced existing REST APIs by migrating them to Hasura GraphQL to improve flexibility and query performance. Deployed and managed the Hasura GraphQL engine in an on-premises (non-cloud) environment running on Kubernetes.
  - Collaborated with the team to design and build end-to-end data pipelines from multiple data sources using Amazon Managed Workflows for Apache Airflow (MWAA). Orchestrated data ingestion and transformation processes, with data processed and stored in Snowflake for analytical and reporting purposes. Ensured pipeline reliability, scheduling efficiency, and data quality across workflows.

*Fullstack Developer (Apr 2022 – Jun 2023)*

Full Time

- I have focused on working with streaming data technologies such as **Confluent** and Kafka. As a **Confluent developer**, I have gained valuable experience in data integration from sources to sinks. This has strengthened my understanding of databases, linux, docker, networking, cloud and on-premise environments, as well as various programming languages commonly used in backend development, such

as Java, Python and Go. Some of my key accomplishments include:

- Filter the streaming events that are sourced from JATS via Streaming Open API and connected to replicator confluent, then apply filters to the data from this topic as per the business requirements. And another sourced from ITCH by using the **TCP socket** method connected to the Confluent.
- A service for event **streaming delay** has been created using a docker container, with **parameterized delay times** (portainer). Integrate the kafka broker with haproxy so that the broker can be accessed over the internet (via a reverse proxy) using a token.
- Maintenance of Attachment-generator service, which is a web server built using **Golang** to store document data such as stock records and others. The data is sourced from ActiveMQ messaging (OpenAPI) connected to Confluent, then consumed and stored as a document. These documents can be accessed through a REST API with a security token
- Guide on how to integrate REST applications to enable message production via the **Kafka REST Proxy**, as well as implementing **RBAC** (Role-Based Access Control) in each of its services
- Creating a topics replicator template from **Data Center** cluster to **Data Replication Center** cluster and documenting the usage of several configurations required for tuning
- Creating a connection from external databases, a template for **source CDC SQL Server** connector, Vertica sink connector, SQL Server sink connector, and documentation to be used for other connector building purposes.
- Setting up an external Kafka Connect for connectors that are not yet supported by **Confluent Cloud**, such as the Vertica Sink connector, and integrating their data using Schema Registry Confluent Cloud
- Processing data from topics using **ksqldb** Confluent Cloud & Platform like Joining and filtering data for business needs.

**CV Harahap Petmart** | Banda Aceh, Aceh, Indonesia

*Digital Marketing Specialist (Dec 2021 – Apr 2022)*

*Part-time*

*WordPress Developer (July 2020 – Dec 2021)*

*Part-time*

- Built an online store using wordpress and also responsible for integrating with the database and monitoring site performance.

**Syiah Kuala University** | Banda Aceh, Aceh, Indonesia

*Junior Programmer at Control System Laboratory (Nov 2021 – Feb 2022)*

*Part-time*

- Built a JetBot collision avoidance and object detection algorithm using ROS with CNN method [\[Link\]](#)
- Designed SLAM (simultaneous localization and mapping) on the JetBot robot using ROS and RPLidar A2 using a webconsole-based controller [\[Link\]](#)
- Created training modules [\[poster\]](#) and robotics books with ROS under [Aulia Rahman, ST., M.Sc](#)
- Coffee beans detection using jetson docker inference with YOLO V3 architecture [\[Dataset\]](#)
- Processing eeg signals to detect autism spectrum disorder (ASD) using the SVM method

*Specialist Internship at Control System Laboratory (Nov 2020 – Dec 2020)*

*Part-time*

- Designed a Navigation System on Drone with ROS and Gazebo as a Simulation Application [\[PDF\]](#)

*Laboratory Assistant (February 2020 – November 2020)*

*Part-time*

- Tutored and Demonstrated lab to 80 students in using laboratory tools in Basic Control Systems.

## PROJECTS

### Enhancement Website System Operation Online PLN UP2B JATENG & DIY

(Apr 2023 – Present)

- In adding features and fixing bugs from the existing website, I worked on the backend using Golang. [\[API DOCS\]](#) [\[WEB UI\]](#)

### Designing SLAM (simultaneous localization and mapping) on the JetBot robot using ROS and RPLidar A2 using a webconsole-based controller

(Jan 2022 - Mar 2022)

- The project uses the Robot Operating System (ROS) and RPLidar A2 for sensor data, and it includes a web console-based controller for operating the robot. SLAM is a technique for mapping an environment and simultaneously localizing a robot within it, and in this case, it's applied to the JetBot with a focus on user control through a web console. [\[demo\]](#)

### Deep Learning Implementation on JetBot integrated with ROS

(Des 2021 - Feb 2022)

- involving the integration of deep learning techniques with JetBot (a type of robot) within the Robot Operating System (ROS) framework. It implies that deep learning algorithms are being used to enhance the functionality or capabilities of a JetBot while working with ROS. [\[demo\]](#)

### Robocar Keyboard Controller ROS

(Jan 2020 - Feb 2020)

- Running a ROS program on a mobile robot using the keyboard teleop node. [\[demo\]](#)

## HONORS & AWARDS

### ALIBABA CLOUD : PolarDB Global Hackathon 2023

Innovation Award (March 2023)

- PolarDB is developed by Alibaba Cloud, it provides high performance and high availability of commercial database with ease to use. This contest inspires developers and enterprises to use PolarDB to empower innovation. The Stock Wizard is a platform designed to help users understand the stock market and enjoy a simulated stock trading experience. [\[certificate\]](#) [\[project demo\]](#)

### KOMINFO and Association of IoT Indonesia

*Top 10 Finalists in IoT Makers Creation Competition* (Sep 2020)

- The IoT competition is held annually by the Indonesian IoT Association which is attended by 60 national-level teams from various regions. In this team, I am the one who builds Deep Learning algorithm [\[certificate\]](#) [\[project demo\]](#).

### Indonesian Directorate General of Higher Education (KEMENRISTEKDIKTI) .

*Participant of PIMNAS 34* (Nov 2021)

- PIMNAS is a prestigious competition among students throughout Indonesia, in this Pimnas competition my team took the PKM-KC scheme with the title Applicable Design Wheezing Sound Integrated Real Time with Gadget [\[PDF\]](#). In this team, I was the one who builds Deep Learning algorithm [\[certificate\]](#) [\[project demo\]](#)
- **Patent:** 000280118 [\[PDF\]](#)

## EDUCATION

**Syiah Kuala University** | Banda Aceh, Aceh, Indonesia

*Electrical Engineering* (2017 – 2022)

- **GPA:** 3.34 [\[transcript\]](#) [\[cert\]](#)
- **Project:** Rescue Drone Simulation using Object Detection Drone with ROS and Gazebo[\[PDF\]](#)

## ORGANIZATION

**Syiah Kuala University** | Banda Aceh, Aceh, Indonesia

- *Head of the Student Da'wah Institute of the Faculty of Engineering* (2018 – 2019) [\[Structure\]](#)

## TECHNICAL SKILLS

- Programming language (Python, Java, Go) , Linux Server (Ubuntu, CentOS), Databases (Postgresql, mysql)  
Docker, Qlik Replicate, Confluent Cloud and Platform as Confluent Developer

## LICENSES & CERTIFICATION

### **DataCamp**

- have taken 20 machine learning and data science have taken a python learning career path course on data engineer and machine learning[\[PDF\]](#)