Jonathan

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SUMMARY

5th Semester Computer Science student (3.79 GPA) specializing in data science, data engineering and app development. Currently building production ETL pipelines with Airflow and PySpark reducing approval workflows by 50%, Built OLTP simulator processing 100K+ daily transactions, and LLM-powered Text-to-SQL system accelerating analytics by 90%. Published researcher on BERT optimization (ICITCOM 2025) and hackathon winner.

Consistently building expertise in AWS, PostgreSQL, RAG, and end-to-end AI application development.

EDUCATION

BINUS University

Alam Sutera

5th Semester student in Computer Science, Intelligent System streaming (3.79 GPA)

Graduating in 2027

- 2nd Place, ICP Hub Indonesia Hackathon 2024 (Certification, Github)
- Certifications: Neo4j Certified Professional and 365Career Data Science Bootcamp (Neo4j, 365Career)
- **Organizations**: IT Development Staff at BSLC (Binus Student Learning Community)
- **First-author and Presented Research Paper** (Publication Pending) at **ICITCOM 2025** titled, "Optimizing BERT for Fake Job Posting Detection: A Comparative Study for Data Augmentation Integrity and Model Performance" (Certification)

EXPERIENCE

PT. Soohara Solusi Siber

Kb. Jeruk, Jakarta Barat

Part-time, Data Engineer & Machine Learning Engineer

June-Sep 2025

- Developed a cloud-native ROA approval tool using AWS to automate financial workflows. , reducing manual approval time by 50%
- Migrated data from PostgreSQL, Excel, and Google Drive to AWS S3, centralizing data management.
- Built Medallion Architecture ETL pipeline with Apache Airflow and PySpark, implementing Bronze/Silver/Gold layer processing to unify disparate data sources and enable department-level data governance

BSLC (Binus Student Learning Community) IT Development, Web Developer

BINUS University, Alam Sutera

3rd-5th Semester

- Developed and maintained organizational websites using React and Node.js, serving 100+ active student members with 99.5% uptime
- Led community service initiative (PKM) managing team of 10 mentors to deliver leadership and time management workshops for 60+ high school students in Jakarta Timur, achieving 95% satisfaction rating

PROJECTS

Text-to-SQL Multi-Agent System

Technologies: Python, Smolagents, LLM, SQLAlchemy, ETL

<u>Github</u>

- Building a Python-based multi-agent system that converts user input into SQL queries, utilizes Gold-layer views with RAG grounding, and accelerates self-service analytics, reducing report creation time by 90%.

OLTP Banking System Simulation

Technologies: Python, Airflow, PostgreSQL, Docker, SQLAlchemy, CDC (in progress)

<u>Github</u>

- Engineered Airflow-orchestrated data pipeline simulating realistic banking operations, generating 100K+ daily transactions with temporal patterns, customer lifecycle management (CRUD), and balance reconciliation across containerized PostgreSQL database.
- Designed relational schema with referential integrity constraints for customers, accounts, and transactions; implemented automated data quality checks preventing duplicate records and maintaining transactional consistency.
- Architected for production-grade testing of data pipelines and ETL connectors; currently integrating Change Data Capture (CDC) with Debezium for incremental batch ingestion and enhanced data freshness.

SKILLS & FOCUS

Programming: Python (Pandas, NumPy, SQLAlchemy, Flask, scikit-learn, TensorFlow), JavaScript (React, Node.js, Express, React Native), C

Data Engineering: Apache Airflow, PySpark, dbt, Basic AWS, ELT with Medallion Architecture, Data Warehousing, CDC **Databases & Query**: PostgreSQL, MySQL, Neo4j, Firebase, Supabase, Advanced SQL (CTEs, Window Functions, Query Optimization, Indexing)

ML & AI: BERT, LLMs, RAG, Multi-Agent Systems, Random Forest, BiLSTM, RNN, CNN, XGBoost, Data mining DevOps & Tools: Docker, Git, REST APIs

Languages: Indonesian (Native), English (Fluent), German (A2)