

# HAFIDH MUHAMMAD AKBAR

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<https://hafidhmuhammadakbar.github.io>

Surakarta, Indonesia

## SUMMARY

Data Engineer at Akuntplus with a solid foundation in ETL processes, data pipeline development, and data modeling. A recent Informatics graduate from Universitas Sebelas Maret, experienced in designing and optimizing end-to-end data workflows. Proficient in Python and SQL, with a strong grasp of database systems, data warehousing, and cloud-based tools. Adept at transforming raw data into reliable, structured formats to support analysis and decision-making. Committed to building scalable, efficient data infrastructure that drives meaningful business impact. Beyond the role, has a personal interest in artificial intelligence, especially in areas like computer vision and natural language processing.

## WORK EXPERIENCES

<b>Akuntplus</b>	Jakarta, Indonesia
Teaching Assistant (Database Systems and Programming Basics) - Contract	Jun 2025 - Now
<ul style="list-style-type: none"><li>Designed and maintained ETL pipelines to extract, transform, and load data from multiple sources into centralized data warehouses</li><li>Developed and optimized SQL queries for efficient data extraction, transformation, and reporting</li><li>Implemented data validation and quality checks to improve reliability and trust in business data</li><li>Documented data processes and created clear handover materials to support team scalability and maintainability</li></ul>	
<b>Bangkit Academy 2023</b>	Remote
Machine Learning Engineer (Project-Based Experience) – Internship	Aug 2023 - Jan 2024
<ul style="list-style-type: none"><li>Developed NutriMate, a full-stack nutrition application that calculates daily calorie needs and generates personalized meal plans using machine learning</li><li>Engineered and optimized recommendation system using collaborative filtering techniques (TensorFlow, Python, Javascript)</li><li>Presented technical solutions to industry experts, receiving recognition for innovative approach to personalization</li></ul>	

## CERTIFICATION

<b>TensorFlow Developer Certificate</b>	Mar 2024 – Mar 2029
Google for Developer	
<b>Bangkit Academy 2023: Machine Learning</b>	Jan 2024
Bangkit Academy	
<b>TensorFlow: Data and Deployment</b>	Nov 2023
Coursera	
<b>Structuring Machine Learning Projects</b>	Nov 2023
Coursera	
<b>DeepLearning.AI TensorFlow Developer</b>	Oct 2023
Coursera	
<b>Machine Learning Specialization</b>	Oct 2023
Coursera	
<b>Mathematics for Machine Learning and Data Science</b>	Sep 2023
Coursera	

## EDUCATION

### Universitas Sebelas Maret

Bachelor of Informatics

GPA: 3.93/4.0

Thesis: Ultrasound Image Segmentation for Breast Cancer Detection Using Double Half-UNet with Attention Mechanism

Surakarta, Indonesia

Jul 2021 – Apr 2025

## ORGANIZATION

### UKM Penelitian dan Pengabdian Masyarakat (P2M)

Member

Participated in workshops, proposal writing, and collaborative projects involving data and technology, while also supporting knowledge-sharing sessions and mentoring junior members

Surakarta, Indonesia

Jan 2025 - Apr 2025

## AWARDS

### 1st Place of Academic Competition of Data Science 2024 (Scientific Paper Category)

Oct 2024

Created "Pixel Attention Half-UNet for Satellite Image Building Detection", a computationally efficient model for satellite image analysis with 70.9% mIoU accuracy

### Finalist of Gemastik XVII 2024 (Data Mining Category)

Sep 2024

Ranked Top 6 nationally in predicting university tuition fee categories (UKT) using machine learning based on socioeconomic data analysis

### 1st Place of 11th Airlangga Ideas Competition 2023

Nov 2023

Designed "Improved Factorized Residual U-Net" for medical image segmentation, achieving 90.24% mIoU through optimized feature extraction modules

### 1st Winner & Best Paper of Gemastik XVI 2023 (Scientific Paper Category)

Sep 2023

Developed "AGU-NET: Attention Ghost U-Net for Biomedical Image Polyp Segmentation", an attention-based deep learning model achieving 86.52% mIoU on endoscopic images

## PUBLICATIONS & CONFERENCES

### Automated Building Segmentation Using Half-UNet with Multi-Scale Residual

Jun 2025

### Attention and Self-Calibrated Pixel Attention

Publisher: [IEEE](#)

### Breast Ultrasound Image Segmentation with Multidimensional Attention and Spatial-

Jun 2025

### Channel Squeeze-and-Excitation Block

Publisher: [IEEE](#)

### Improved Factorized Residual U-Net for Biomedical Polyp Segmentation

Jan 2025

Publisher: [IEEE](#)

## SKILLS

**Hard Skills:** Python, TensorFlow, PyTorch, SQL, SSIS, Java, Machine Learning, Deep Learning, Data Analysis, Database Management, Data Visualization

**Soft Skills:** Leadership, Communication, Problem Solving, Team Collaboration

**Software Skills:** Jupyter Notebooks, VS Code, Git, Docker, Tableau, Google Colab

## LANGUAGES

**Indonesia** - Native

**English** - Advanced