

HAFIY HARIZAN

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SUMMARY

Software Engineer with 4+ years of experience building scalable web applications, APIs, data pipelines, and cloud-based analytics solutions. Skilled in full-stack development, dashboard design, and data engineering, with a proven track record delivering production web applications that strengthened national-scale network analytics operations. Completed Microsoft Azure AI Engineer Associate certification training with hands-on experience in Azure Cognitive Services, Azure OpenAI, and Machine Learning deployment. Holds a Master's degree in Data Science, providing strong foundations in data analysis, machine learning, and AI development. Based in Perth with full work rights and open to Software Engineer, Data Engineer, and AI Engineer opportunities.

TECHNICAL SKILLS

Frontend: JavaScript, TypeScript, React, Next.js, jQuery, AJAX, HTML, CSS, Tailwind, Bootstrap

Backend: Node.js, PHP, Python (FastAPI), RESTful APIs, API integration, server-side development

Databases: MySQL, PostgreSQL, MariaDB, relational database design, query optimization

AI & Cloud: Azure Cognitive Services, Azure AI Studio, Azure OpenAI, Azure Machine Learning, model deployment, prompt engineering, AI solution architecture

DevOps & Tools: Docker, Git, GitHub, GitLab CI/CD, version control, Linux CLI, VS Code

Data Visualization: AmCharts, Leaflet.js, Power BI, Tableau, dashboard development

Data Science: Python, Pandas, NumPy, Matplotlib, Seaborn, data analysis, EDA

Testing & Methodologies: Postman, UAT, Agile, Scrum, CRISP-DM, clean code practices

PROFESSIONAL EXPERIENCE

Visualization & Software Engineer, Telekom Malaysia

March 2024 - June 2025

- Developed scalable data platforms using PHP, JavaScript, and SQL to process datasets from 3M+ customers, improving system stability and accelerating enterprise reporting.
- Built interactive dashboards and web visualizations with AmCharts and GeoServer, delivering real-time infrastructure insights and reducing manual reporting workload.
- Automated data ingestion and validation workflows, integrating ML outputs into dashboards to enhance diagnostics and network optimization.
- Applied software engineering best practices (version control, clean architecture, modular scripting, documentation) to deliver maintainable and secure production systems.
- Strengthened data integrity and governance by implementing validation logic, access controls, and monitoring scripts, ensuring high availability and regulatory compliance.

Network Geospatial Viz Solution Engineer, Telekom Malaysia

March 2022 - March 2024

- Developed and enhanced geospatial visualization tools using FME, GeoServer, Postgres, Power BI, and Tableau to support network planning and spatial analysis.
- Automated spatial data processing workflows with FME, reducing manual effort and improving efficiency for engineering and analytics teams.
- Deployed and managed GeoServer services and Tableau Server dashboards, ensuring secure access and reliable performance for internal users.
- Designed and optimized Power BI and Tableau dashboards to deliver real-time spatial and network insights, improving reporting speed and clarity.
- Improved spatial database performance in Postgres and MariaDB through indexing, query tuning, and schema restructuring, enabling faster large-scale mapping and analytical workloads.

- Supported technical solution development for infrastructure planning and data analysis.
 - Assisted in executive-level projects using PHP, JavaScript, SQL, and Python to improve workflows and decision-making processes.
 - Built foundational skills in data analytics, software engineering, strategic planning, and stakeholder communication.
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KEY PROJECTS

- DREAM (Data Repository for Exploratory Analysis and Management) – Developed a centralized data platform using Next.js for the front end, AJAX API calls for dynamic data retrieval, and FastAPI for backend services. Automated workflows reduced data retrieval and preprocessing time from hours to minutes, enabling analysts and engineers to access clean datasets in real time. Delivered interactive insights through AmCharts visualizations, improving decision-making speed and accuracy.
 - NDM (Network Data Mart) – Built a scalable data mart with JavaScript, PHP, and MariaDB cron workflows, automating ETL pipelines to process millions of records daily. Removed manual workload by implementing 100% automated reporting functions, enabling faster diagnostics and improved decision-making for operational teams.
 - FIVE (Fiber Infrastructure Visualization and Enhancement) – Developed a GIS-based fiber infrastructure visualization system by automating FME + bash scripts to ingest and store GPKG spatial datasets. Integrated machine learning tools to calculate shortest paths, which were then mapped on a web-based smart map using Leaflet, improving route planning accuracy by ~20% and enhancing infrastructure mapping efficiency.
 - MSQoS (Mandatory Standards for Quality of Service) – Built an automated compliance monitoring system for MCMC reporting, combining validation logic, monitoring scripts, and secure data pipelines. Ensured 100% timely submissions and reduced manual intervention by ~50%.
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EDUCATION

Universiti Teknologi MARA (UITM), Malaysia

Master's in Data Science

2021 - 2022

Universiti Teknikal Malaysia Melaka (UTEM), Malaysia

Bachelor of Mechatronics Engineering With Honours

2015 - 2019