

VALENTINE AGAM

SOFTWARE ENGINEER | FULL-STACK & BACKEND ENGINEERING | AI/ML
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PROFESSIONAL SUMMARY

Software engineer and product builder with experience delivering full-stack applications, backend services, enterprise workflows, and applied AI/ML systems across healthcare, recruitment, geospatial analytics, and client-facing products. Skilled in translating operational needs into maintainable software from architecture and data modeling through deployment and support. Combines a Cognitive Science background with practical strengths in Python, TypeScript, Next.js, FastAPI, PostgreSQL, Docker, Kubernetes, computer vision, and automation.

TECHNICAL SKILLS

Languages	Python, TypeScript, JavaScript, C++, Dart, SQL
Frontend	React, Next.js, HTML, CSS, Tailwind CSS, Flutter
Backend & Data	FastAPI, Flask, Node.js, REST APIs, PostgreSQL, MongoDB, Supabase
AI/ML	TensorFlow, YOLO, OpenCV, XGBoost, LightGBM, SHAP, OCR, scikit-learn, Pandas
Cloud & DevOps	Docker, Kubernetes, Linux, Git, GitHub, CI/CD, DigitalOcean, Vercel
Analytics & GIS	QGIS, Power BI, remote sensing, geospatial data processing

PROFESSIONAL EXPERIENCE

Pegawai Informasi Maklumat Dan Komunikasi Korporat (MySTEP) Jun 2026 - Present

Hospital Miri, Sarawak State Health Department | Miri, Sarawak

- Lead end-to-end delivery of digital systems supporting hospital operations, public information, and accessibility initiatives.
- Built a full-stack employee onboarding and document workflow using Next.js, PostgreSQL, Docker, and Kubernetes to replace repetitive paper-based processes and reduce duplicate data entry.
- Developed wheelchair asset tracking and a hospital-wide wayfinding platform to improve equipment visibility and navigation for patients, visitors, and emergency responders.
- Design and maintain the official Hospital Miri website while coordinating requirements across technical and non-technical stakeholders.

Co-Founder & Full-Stack Developer Mar 2026 - Present

Scribear | Miri, Sarawak

- Deliver custom full-stack applications for paying clients, owning discovery, architecture, interface development, APIs, relational data models, deployment, and support.
- Manage production databases, access controls, CI/CD workflows, technical documentation, and issue resolution across the complete product lifecycle.
- Translate client operations into responsive, secure, and maintainable digital products.

Junior Data & Backend Engineer (Contract) Dec 2025 – Mar 2026

Zenara Jaya | Miri, Sarawak

- Developed an AI-assisted applicant tracking system with FastAPI, Next.js, Claude API, PDF extraction, and OCR fallback for scanned documents.
- Built and deployed a resume-parsing microservice on DigitalOcean with Supabase PostgreSQL, object storage, caching, role-based access control, and audit-ready workflows.
- Design and maintain the official Hospital Miri website while coordinating requirements across technical and non-technical stakeholders.

GIS Data Analyst Intern

Jul 2024 – Oct 2024

Sarawak Oil Palms Berhad | Miri, Sarawak

- Developed a YOLO and TensorFlow aerial-imagery pipeline that achieved 92% detection accuracy for oil-palm anomaly identification.
- Processed remote-sensing datasets and automated detection-to-report workflows using Python, OpenCV, QGIS, and SQL-based validation.
- Produced technical reports and collaborated with operational teams to improve GIS data quality, reliability, and software utilization.

SELECTED PROJECTS

eBorang (Hospital & Smart Document System) | Next.js, PostgreSQL, Docker, Kubernetes, Typescript

- Designed a full-stack platform that digitizes employee onboarding and repetitive administrative forms, reducing duplicate data entry and replacing paper-based workflows.
- Built maintainable data flows and cloud-native deployment foundations for secure, centralized hospital operations.

ValeFlix Cross-Platform Streaming Experience | Kotlin, Android, Media3, MVVM, Electron, Cloudflare Workers, D1

- Extended and rebranded an open-source Android TV and mobile streaming interface with responsive layouts, content discovery, local watch-state management, and Media3/ExoPlayer playback.
- Engineered a Windows desktop companion and secure PIN-linked synchronization service to merge watch history, playback progress, and favourites across devices.

XAI-PE Analyzer | Python, XGBoost, LightGBM, SHAP, Flask

- Built an explainable malware-analysis platform across 412 engineered PE security features with ranked SHAP contributions, single-file analysis, and batch scanning.
- Designed an EMBER-compatible, GPU-ready training pipeline for up to 1.1 million samples with web, REST, and CLI workflows.

Darklace AI Assistant | Python, React, Electron, WebSockets, Speech Recognition

- Created a real-time desktop meeting assistant with voice input, persistent WebSocket streaming, and low-latency language-model responses.
- Separated AI orchestration, audio handling, and presentation into a maintainable always-on-top workflow.

Super Dim Mobile Application | Flutter, Dart

- Developed a Flutter mobile application (APK) for adaptive screen-brightness control, providing a more comfortable viewing experience in low-light environments by creating a dark overlay above the screen.
- Designed a clean, accessible mobile interface focused on usability and responsive interaction.

EDUCATION

Universiti Malaysia Sarawak (UNIMAS)

Nov 2025

Bachelor of Science in Cognitive Science | Minor in Computer Science (AI/ML) | CGPA: 3.12

Dean's List (Year 3, Semester 2)

Relevant coursework: Artificial Intelligence, Data Analysis, Statistics, Software and Web Development

CERTIFICATIONS & RECOGNITION

- CompTIA Security+ (2026)
- Python for Data Science - IBM Cognitive Class
- Mobile Application Development Award - Universiti Malaysia Sarawak (2024)

LANGUAGES

- English – Fluent in Written and Speaking
- Bahasa Melayu – Fluent in Written and Speaking