Muhammad Aliffandy

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Fullstack Engineer with strong expertise in delivering end-to-end technology solutions from system design and scalable architecture to service deployment. Experienced in integrating artificial intelligence into production systems and solving complex problems through data-driven innovation. Adept at transforming ideas into impactful, sustainable digital solutions that create measurable value for users and organizations.

EDUCATION

JEMBER UNIVERSITY   **Jember, Jawa Timur**
Infromation Technology   **January 2025**
GPA 3.88 Cumlaude

WORK EXPERIENCE

PukulEnam
Fullstack AI Engineer   **August 2025 - Present**
- Optimized API service data queries using ORM technology, resulting in a 50% faster data retrieval.
- Accelerated CRUD API service processes by 60% through the integration of a functional component-based UI.
- Automated the batch retrieval of 500+ records using n8n workflow automation.
- Reduced execution time from 2h 10m to 1h 10m — achieving a 46% performance improvement.
- Delivered a classification report to identify potential model bias, enabling a more transparent and data-driven evaluation process.
- Enhanced hybrid model performance for colonoscopy detection by 30% by implementing a feedback agent mechanism.
- Reduced model inference latency by 87% (from ~4 mins to ~30 secs) through architectural optimizations and efficient resource management.
- Architected a full-stack SaaS solution to deploy the AI model across Web, iOS, and Android platforms, enabling real-time access for users.
- Deployed a Generative AI-powered assistant capable of explaining medical findings to users, significantly improving the interpretability of model predictions.

Frontend Engineer   **June 2025 - Present**
- Developed an Admin CRUD service using React + Chakra UI, supporting 500+ records and actively used by 10+ users.
- Built a reusable component library based on Atomic Design, reducing code duplication by 30% across the project.
- Integrated API authentication (JWT) to enhance user access security without compromising UX.
- Redesigned the application interface from a basic layout into a more interactive and engaging design with motion animations and clean UI.
- Revamped the main application UI with a modern design approach (Atomic Design, responsive layout) to improve usability and consistency.

Algorithmics Indonesia
Coding Tutor   **May 2025 - Present**
- Mentored 12 students in Scratch (visual programming), with 83.3% successfully completing a project each month.
- Guided 8–10 students in learning the fundamentals of Python programming.
- Improved students' algorithm comprehension by 65%, measured through assignments.
- Supported students in producing 1 project per month, while enhancing their project presentation skills.
- Provided constructive feedback and delivered regular progress reports to parents.
- Increased student motivation to learn algorithms, reflected by an 86% monthly attendance rate.

PT. ADMA DIGITAL SOLUSI
Frontend Engineer   **February 2024 - June 2024**
- Developed projects based on Next.js with a scalable and efficient architecture.
- Built a Content Management System (CMS) and Communication Management Tool that reduced manual content handling time by 40% through streamlined workflows and predefined design slicing.
- Integrated front-end with backend APIs, enabling seamless data flow and reducing API error rates by 20%.
- Connected applications with Twitter, Instagram, Facebook, and WhatsApp APIs, expanding multi-platform communication capabilities.
- Optimized performance with SSR, SSG, and caching, reducing page load time by 15%.
- Collaborated in a team using Agile/Scrum methodology, participating in daily stand-ups, sprint planning, and retrospectives.

TECHNOLOGY INFRASTRUCTURE LABORATORY
Operating System Teaching Assistant   **January 2024 – June 2024**
- Prepared learning modules for Linux Operating System courses.
- Guided and mentored 30–40 students in understanding Linux concepts and practical usage.
- Applied theoretical and practical learning in Linux Operating System during lab sessions.
- Provided evaluations and feedback to students.
- Achieved a 90% final project success rate, with students completing class assignments to a high standard.
- Collaborated with fellow teaching assistants to facilitate lab sessions efficiently.

BINAR ACADEMY

Fullstack Web Developer   **August 2023 - December 2023**
- Collaborated in a team project to develop a Massive Open Online Course (MOOC)-based website.
- Built a Database Management API with CRUD functions for Courses and an API with CRUD functions for Modules.
- Developed a login function for course and module publishing, as well as authentication for admin login.
- Created the front-end pages for the MOOC application.
- Implemented User Order Management logic, allowing admins to verify user purchases and process payments.

DSAA GROUP

Frontend Mobile Developer   **July 2023 - August 2023**
- Implemented pixel-perfect UI slicing from Figma designs into Flutter, ensuring design consistency and improving delivery speed.
- Applied the Atomic Design methodology to structure the Flutter framework, resulting in a more reusable and maintainable component library.
- Leveraged Dart algorithms to create smooth UI animations and dynamic interactions, enhancing the user experience.
- Performed manual testing and debugging to improve code reliability, reducing UI-related bugs before release.
- Collaborated closely with senior developers, contributing to faster feature implementation and knowledge sharing within the team.

FASTWORK ID

Freelance Graphic & UI/UX Designer   **January 2022 – January 2023**
- Worked as a freelancer on Fastwork ID, a digital product and freelance services marketplace
- Delivered custom design projects for clients, achieving an average rating of 4.7/5.
- Designed UI/UX applications, resulting in 6 successful sales with an average rating of 4.6/5.
- Maintained a 100% project completion rate, ensuring client satisfaction by providing revisions and engaging in post-delivery discussions.

RELEVANT PROJECTS

THESIS

Computer Vision   **September 2024 – January 2025**
- Developed a Head Detection System using the HeadPose algorithm by combining EfficientNet as the backbone and Transformer Encoder.
- Utilized the BIWI dataset with a 3-fold cross-validation technique to evaluate model performance.
- Achieved a Mean Absolute Error (MAE) reduction of 0.03 (0.89%), improving model accuracy.
- Reduced training time by 18.48% when tested over 10 epochs on each backbone.
- Demonstrated that the modified architecture is more efficient and effective for deployment on resource-constrained devices.

RESEARCH PROJECTS

Fullstack & AI Engineer   **September 2024 – February 2025**
- Enhanced a breast cancer detection model by applying LDA-based feature extraction with Logistic Regression and SVM, achieving 97% accuracy.
- Developed an ensemble learning model using a Genetic Algorithm for heart disease detection, reaching 91% accuracy.
- Built a text mining sentiment analysis model leveraging IndoBERT with POS tagging, achieving 95% accuracy on local facility review datasets.
- Implemented steganography (LSB) with RSA encryption for secure data hiding in images, applied in an e-commerce context.
- Designed and deployed web applications across multiple projects and real-world case studies, ensuring scalability and maintainability.

TECHNICAL SKILLS

- **Programming Languanges :** JavaScript, TypeScript, Python, Dart, CSS3, HTML5, n8n
- **Framework:** React Js, Next JS, React Native, Vue Js, Django, Flask, Express.js, Flutter, JWT, MUI, NPM, NodeJS, Socket.io, TailwindCSS, Three.js, Webpack, Vite, Scikit-learn, TensorFlow, PyTorch
- **Databases:** MongoDB, MySQL, SQLite, Postgres, Firebase,
- **Operating Systems:** Windows, Linux
- **Software:** Visual Studio Code, Android Studio, Pg Admin , XAMPP , Github, Postman, Docker

CERTIFICATIONS

FRONTEND ENGINEER, ADS DIGITAL PARTNER	**June 2024**
FULLSTACK WEB DEVELOPER, BINAR ACADEMY	**December 2023**
JAVASCRIPT ALGORITHMS AND DATA STRUCTURES, FREECODECAMP	**November 2023**
FUNDAMENTALS OF JAVASACRIPT PROGRAMMING, DICODING	**January 2023**
FUNDAMENTALS OF WEB PROGRAMMING, DICODING	**January 2023**