

Andrew Wallace

Informatics Engineering Student | Full-stack & iOS Developer

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PERSONAL PROFILE

Informatics Engineering student at Institut Teknologi Sepuluh Nopember with hands-on experience building full-stack web applications using TypeScript, Next.js, React, NestJS, and Express.js, as well as native iOS apps using Swift and SwiftUI. Experienced in contributing across frontend and backend development in cross-functional teams, with strong interest in clean code, design thinking, and user-centered product development.

EDUCATION

Institut Teknologi Sepuluh Nopember

Bachelor's Degree, Informatics Engineering - Current GPA: 3.97 / 4.00

2023 - Present

Surabaya, Indonesia

WORK EXPERIENCE

Apple Developer Academy @ UC

Apple Developer Academy Learner (Tech Intern)

March 2026 - Present

Surabaya, Indonesia

- Participating in Apple's 10-month immersive program covering iOS development, design thinking, and entrepreneurship.
- Building native iOS application prototypes using Swift and SwiftUI in challenge-based learning teams.
- Collaborating in cross-functional teams while contributing as a technical team member to translate design concepts and product direction into functional iOS features.
- Applying human-centered design and rapid prototyping methodologies to deliver end-to-end product experiences.

PT Eksakta Teknologi Zenith Yatra (ETZY Tech)

Backend Engineer Intern

August 2025 - Present

Surabaya, Indonesia

- Designed and implemented backend architecture and relational database schemas for a Point-of-Sale (POS) module within a modular ERP platform, supporting promotions, cashier sessions, terminal management, and end-to-end sales workflows.
- Engineered transactional services to ensure data integrity and consistency across sales processing, inventory movements, purchasing flows, and financial records.
- Integrated POS operations with core ERP modules including inventory management, purchasing, and accounting systems to maintain cross-module reliability.
- Developed scalable REST APIs with structured validation and centralized error handling to support maintainable and extensible backend services.

Direktorat Pengembangan Teknologi dan Sistem Informasi (DPTSI ITS)

Frontend Developer

March 2026 - June 2026

Surabaya, Indonesia

- Rebuilt the frontend of MyITS OneData, an internal ITS data warehouse platform, migrating PHPMaker-generated legacy interfaces to a Laravel 12 and Blade-based architecture.
- Built responsive and maintainable admin dashboard pages using Blade and Bootstrap, improving interface consistency across data management, access control, and monitoring workflows.
- Implemented user-facing dashboard features including unified search, role-aware access views, data tables, and monitoring interfaces, integrating frontend components with APIs and Elasticsearch services.

SPMB Jawa Timur 2025 (formerly PPDB Jawa Timur)

Frontend Developer

January 2025 - July 2025

Surabaya, Indonesia

- Maintained and enhanced a high-traffic Next.js application supporting over 250,000 concurrent users during the official high school registration period, achieving 99.98% uptime and sub-second page load performance under peak access conditions.

- Collaborated with backend and DevOps teams to optimize a production-grade static frontend deployment, ensuring scalability, reliability, and seamless user experience during peak traffic.
- Integrated RESTful APIs to deliver accurate, real-time registration data, maintaining consistent application state across critical user workflows.
- Responded rapidly to evolving stakeholder and policy requirements, implementing time-sensitive updates while preserving system stability and performance.

ORGANIZATIONAL EXPERIENCE

Software Engineering Laboratory - Institut Teknologi Sepuluh Nopember
Laboratory Assistant

June 2025 - Present
Surabaya, Indonesia

- Coordinated a Git Version Control System training program for 80+ participants, overseeing material development, instructor scheduling, and event execution end-to-end.
- Delivered AI Prompting workshop to Karang Taruna as part of community outreach, introducing practical use of generative AI tools for non-technical audiences.
- Delivered training sessions and mentoring to students on software development (particularly frontend) and design thinking.

Schematics ITS
Senior Frontend Developer

February 2025 - December 2025
Surabaya, Indonesia

- Reviewed and provided feedback on junior staff code, fixed critical bugs, and played a key role in ensuring the overall business flow of the web application.
- Collaborated closely with the backend team to align frontend implementation with API behavior, ensuring smooth data handling and system reliability.

Petroleum Integrated Days 2025
Junior Backend Developer

October 2024 – May 2025
Surabaya, Indonesia

- Developed a RESTful API using Golang to support the frontend for an oil and gas competition website, integrating PostgreSQL for data management and implementing JWT-based authentication. The API provides features for merchandise management and other event-related functionalities.

Future Energy Summit 2025
Senior Frontend Developer

October 2024 – May 2025
Surabaya, Indonesia

- Developed a website to showcase talk shows, renewable energy competitions including business case challenges, and other related events.
- Worked closely with UI/UX designers to implement intuitive and responsive interfaces using Next.js and Tailwind CSS.
- Integrated frontend components with backend APIs to ensure efficient data handling and user interactions.

INI LHO ITS! 2025
Senior Frontend Developer

October 2024 - March 2025
Surabaya, Indonesia

- Developed a website to present ITS to high school students and support registrations for tutoring programs, talk shows, campus visits, and tryouts.
- Collaborated with UI/UX designers to translate design concepts into interactive web pages using Next.js and Tailwind CSS.
- Integrated the frontend with backend APIs to streamline data flow and ensure smooth functionality.

Schematics ITS
Junior Frontend Developer

March 2024 - December 2024
Surabaya, Indonesia

- Developed a website to showcase the 4 main events of Schematics ITS competition, transforming design mockups into functional and visually appealing web pages using Next.js and Tailwind CSS.
- Integrated backend APIs to ensure smooth data flow, providing a seamless user experience for event information and registration.

RESEARCH PROJECTS

Bridging Signal and Image Domains: Wavelet-Assisted ViT for Early Detection of Cassava Disease with Hyperspectral Data

- Investigating Wavelet-Assisted Vision Transformer (ViT) architectures to bridge one-dimensional spectral signals and two-dimensional image representations for hyperspectral data analysis.
- Targeting early, non-invasive detection of cassava diseases (CMD, CBD) to mitigate yield loss in food-security-critical crops.
- Contributing to literature review and methodology sections, covering hyperspectral imaging, ViT applications, and wavelet-deep learning integration.

Hyperspectral Data Analysis using Attention Mechanism of Deep Learning: An In-Depth Survey

- Identified key research trends in attention mechanisms through systematic literature review and word cloud visualization.
- Documented technical details and applications of leading attention mechanisms to build a comprehensive knowledge base.
- Co-authored introduction and literature review sections, establishing research context and theoretical background.

ACHIEVEMENTS

- 1st Place Winner, SMA Awards Kompetisi Sains - Dinas Pendidikan Jawa Timur and PT JawaPos Koran
- Top 15, OSN SMA Informatics (Surabaya) - Pusat Prestasi Nasional
- Top 5, OSN SMP IPA (Surabaya) - Pusat Prestasi Nasional

CERTIFICATIONS

- Cloud Security Foundations - AWS Academy (December 2025)
- Cloud Foundations - AWS Academy (December 2025)
- Security Operations Fundamentals - Palo Alto Networks (December 2025)
- Cybersecurity Foundation - Palo Alto Networks (December 2025)
- Cloud Practitioner Essentials (Belajar Dasar AWS Cloud) - Dicoding (July 2023)

SKILLS

Frontend: React, Next.js, HTML, CSS, Tailwind CSS, TypeScript
Backend & Database: Express.js, NestJS, Elysia.js, Golang, PostgreSQL, MySQL
Mobile: Swift, SwiftUI, Kotlin, Flutter
Programming Languages: C++, Python, Java
Tools & Others: Git, Figma, Postman