LABIB HABIBIE SANJAYA

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Full-Stack Developer | Embedded Systems Engineer

SUMMARY

Full-Stack Developer and **Embedded Systems Engineer** with 2+ years of experience building systems where software meets hardware. Skilled in **React, Next.js, React Native, Electron, Node.js/Express, PostgreSQL**, and **Redis**, with work including a **train-ticket booking platform** in **myBCA Mobile** serving millions of users. Experienced with **Raspberry Pi** and **hardware integration**, including a **desktop app** and **Node.js SDK** that bridges scanner drivers with frontend apps for easy device integration, and **LPR** and **Prepaid Card** integration for parking gate systems. Currently building a Raspberry Pi-based **X-ray cargo inspection System** for Soekarno-Hatta Airport.

PROFESSIONAL EXPERIENCE

PT Mitra Kasih Perkasa **May 2024 - Present**

Software Engineer

- Developed **KAI Lifestyle**, a train ticket booking webview app integrated into **myBCA Mobile App** and **myBCA Website**, serving millions of users end-to-end from search to booking history using **React Vite**.
- Designed and built an internal **Passport Scanner SDK** bridging Plustek SecureScan X50 hardware with Electron apps, deployed at **self-kiosk boarding** at **Benoa International Port Bali**.
- Maintained the **MKP On-Street MPOS Parking Application** (React Native, 20+ locations nationwide) and extended **MKP Access Management Parking Off-Street** with **License Plate Recognition (LPR)** and **PREPAID integration** via **Qprox hardware** and **Raspberry Pi** as a **Gate System Controller.**

Dinas Komunikasi dan Informatika Kota Semarang **Jan 2023 - June 2023**

Frontend Developer Intern

- Assisted in development and updates of the **DISKOMINFO website** using **Laravel**, improving responsiveness and usability.
- Collaborated on UI design and optimized front-end code to reduce load times.

EDUCATION

Diponegoro University (Universitas Diponegoro) — Indonesia **Sep 2020- Jun 2024**

Bachelor's Degree in Informatics

- GPA: 3.59 / 4.00 (Cum Laude) [transcript]
- Thesis: Identifying Top Influencers of the 2024 Indonesian Election on Social Media X (Twitter) Using the Asynchronous Independent Cascade Model (AsIC) and Influence Maximization

PROJECTS & ACHIEVEMENTS

- **Technical Skill :** TypeScript, JavaScript, Java, Python, C/C++, PHP, Next.js, React, React Native, Redux, Laravel, Electron, Express.js, Go, PostgreSQL, Redis, MQTT, Nginx, Linux, Figma, Docker, GitLab CI.
- **X-Ray Projection Warehouse (2026, On Progress)** — Full-Stack & IoT/Hardware Engineer. Built and physically assembled a Raspberry Pi-based device that captures X-ray scanner frames, detects cargo via bounding boxes, and auto-fills shipping forms for real airport deployment. Tools: React Vite & Electron (app), TypeScript, Next.js (dashboard), Tailwind CSS, Express, PostgreSQL, Raspberry Pi, X-ray scanner Smiths Detection.
- **KAI Lifestyle by MKP (2025)** — Front-End Engineer. Architected the full UI layer for a production train-booking app embedded in myBCA, with strict Yup validation and Redux state management. Tools: React Vite, TypeScript, Tailwind CSS, Redux, Yup.
- **Organizations:** Teaching Assistant — Programming Algorithms, Database, Computer Networks, OOP (Aug 2021–2023): Mentored 120+ students, Himpunan Mahasiswa Informatika Undip, Staff Ahli Kominfo (Mar 2022–June 2023): Coordinated digital content and communications for HMIF events (I-Gate , INFO, I-Care, POSITIF 2022, ICONSOLE 2022).