Projects/Portofolio

Laboratorium Management System (SIMALAB: Sistem Manajemen Lab)

Developed a comprehensive lab management system using Next.js, Prisma, and Tailwind. The system supports the management of laboratories, staff, inventory, and the generation of various documents such as borrowing letters, research permits, and lab clearance certificates.
Tech Stack: Next.js, Prisma, Tailwind, PostgreSQL.

Digital Wedding Invitation

Built a mobile-first web app for wedding invitations using Vue.js and Tailwind. Features include sections like greetings, event details, location, and guest messages. The recipient's name is personalized through the URL. Express.js manages guest interactions and messages, with Prisma and MySQL handling data storage.
Tech Stack: Vue.js, Express.js, Tailwind, Prisma, MySQL.

SeeImgPbg

Developed a web application using Flask that integrates ResNet50 and Transformer algorithms for automatic image captioning. Users can upload images of tourist attractions in Purbalingga, and the system generates descriptive captions, which are read aloud using text-to-speech.
Tech Stack: Python, TensorFlow, Flask, MySQL, Tailwind.

VenodeMCU (IoT Vending Machine)

Built an IoT-based vending machine system that uses NodeMCU ESP8266 for hardware control, integrated with a Laravel backend. The system validates RFID cards with sufficient balance and triggers the machine to dispense items. Transaction data is displayed via a real-time web interface.
Tech Stack: PlatformIO, C++, Laravel, MySQL, RFID, Servo, LCD.

Money Savings Management System (SIMANTAB: Sistem Manajemen Tabungan Siswa)

Created a Laravel-based application for managing student savings efficiently. The system tracks savings, manages class and student data, and generates financial summaries.
Tech Stack: Laravel, MySQL, Bootstrap, jQuery, AJAX.

Subject Specialization Selection System (SIMPENAT: Sistem Pemilihan Peminatan Siswa)

Developed a web application that helps 10th-grade students select subject specializations based on academic performance. The system allows students to compete for limited class spots, and admins can track student choices and performance.
Tech Stack: Laravel, MySQL, Bootstrap, jQuery.

Aksara Jawo (Aksara Jawa Pattern Recognition)

Designed a convolutional neural network (CNN) to recognize Javanese script characters. Integrated with an Android app, it allows users to classify Javanese script images through drawing, capturing, or importing images.
Tech Stack: Python, TensorFlow Lite, Kotlin.