

YUSUF AGUNG
RIZKY AFANDI

INFORMATICS
ENGINEERING

Hello, I am Yusuf Agung Rizky Afandi, a Bachelor of Informatics Engineering graduate from the State University of Malang. I am deeply curious about how technology can be leveraged to create meaningful impact, particularly in the fields of education and mental health literacy.

PORTOFOLIO





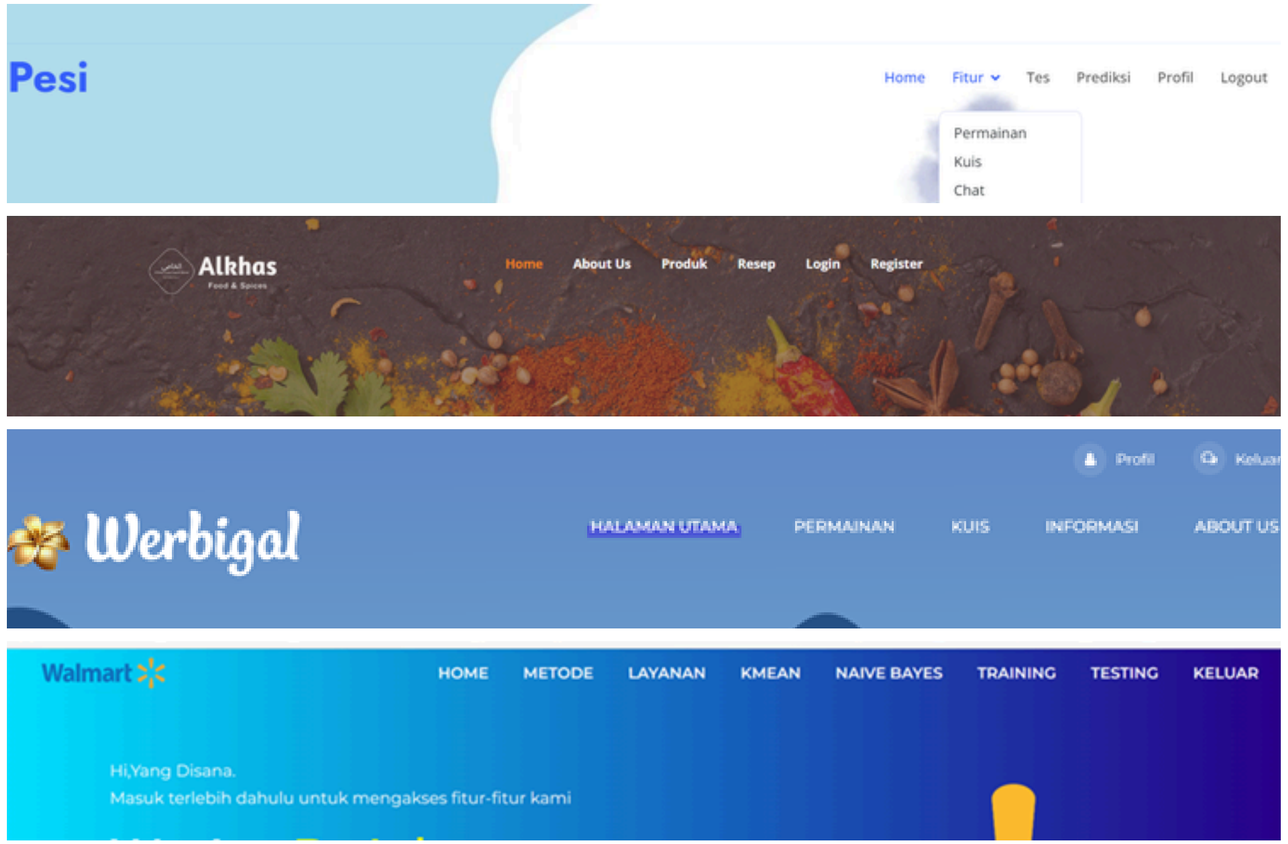
ABOUT ME

I am a Computer Science graduate with strong experience in Full Stack Web Development and Machine Learning. I have developed multiple web and mobile applications using technologies such as Laravel, React, Next.js, Flutter, and RESTful APIs. During my internship, I contributed to building and maintaining production-ready systems, including hospital management and event ticketing platforms.

I have also contributed to several real-world projects involving backend development, database design, API integration, and frontend implementation. In addition, I have received two Intellectual Property Rights (HAKI) in computer programs and participated in innovation and technology competitions.

I am passionate about building scalable and impactful software, particularly in the fields of AI, education, and digital platforms, and I continuously improve my skills by working on real-world projects and learning modern technologies.

MY PROJECT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ABOUT US
Walmart
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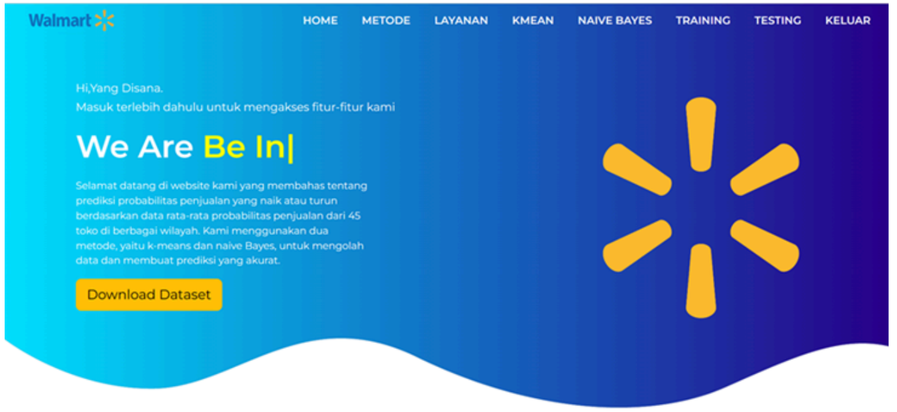
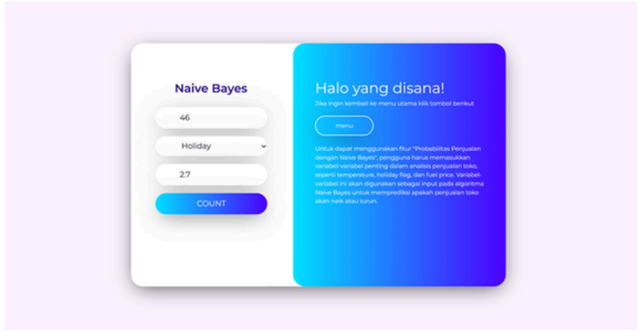
METODE
LAYANAN
KMEAN
NAIVE BAYES
TRAINING
TESTING
KELUAR
Hi,Yang Disana.
Masuk terlebih dahulu untuk mengakses fitur-fitur kami

01. SALTION

SALTION (Sales Prediction) is a web-based application designed to predict weekly sales, helping stores optimize their preparation for market demand and improve sales management efficiency. It uses two prediction methods: K-Means and Naïve Bayes.

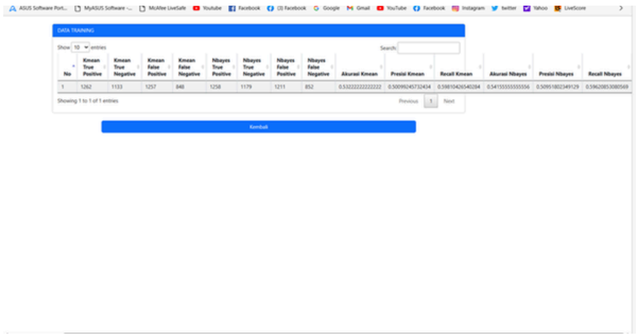
Users input three key variables—temperature, holiday status, and fuel price—to generate sales predictions, displayed in both table and pop-up formats. The app also provides access to the datasets used for predictions.



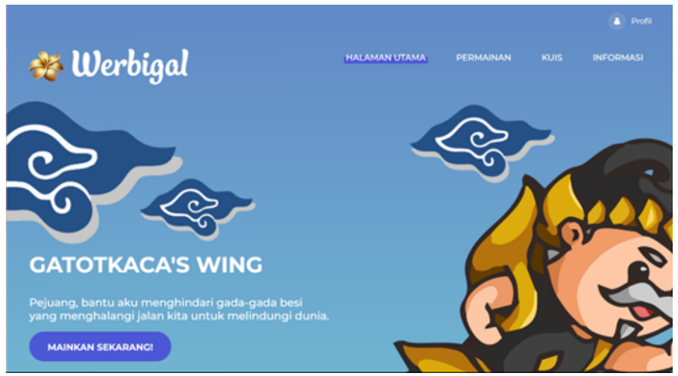


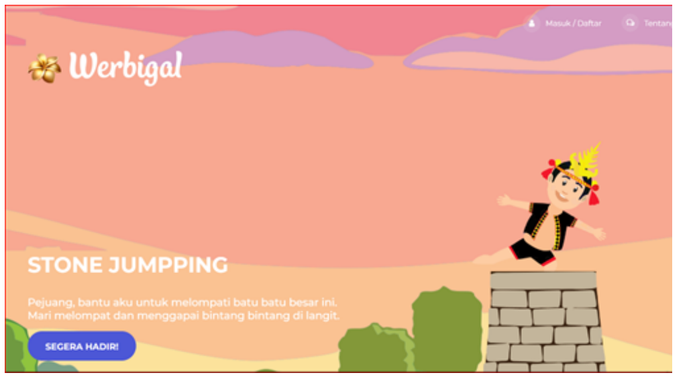




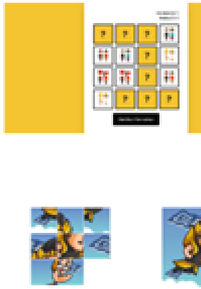


SALTION includes features for training and testing data, allowing users to assess model accuracy, precision, and recall, with results shown in a clear, user-friendly format. This tool helps stores make data-driven decisions to enhance performance and profitability.









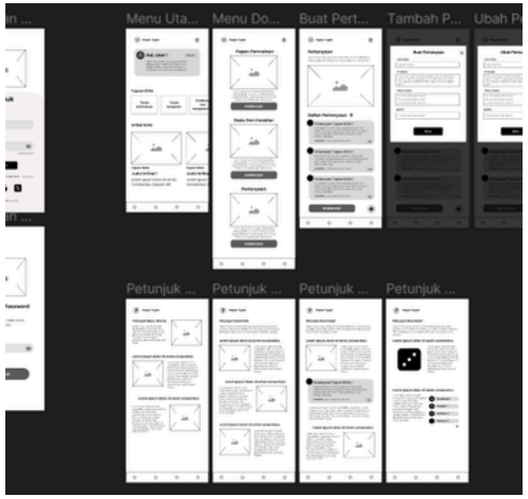
02. WERBIGAL

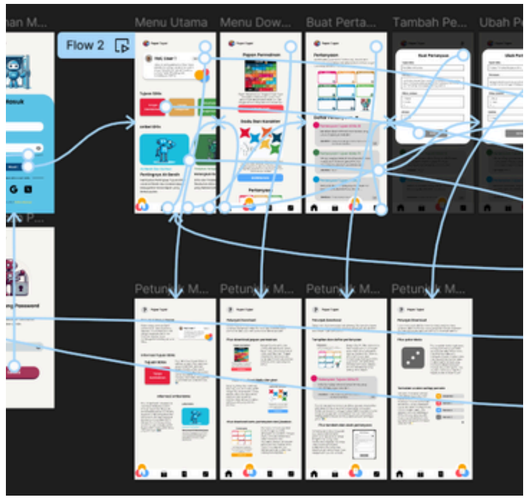
WEBIGAL (Indonesian Cultural Diversity Learning Website) aims to introduce Indonesian culture to elementary school students through accessible gamification learning. The platform offers accurate cultural information to dispel stereotypes and serves as a valuable learning resource, fostering pride and love for Indonesian heritage among youth. WEBIGAL includes engaging content like games, quizzes, and cultural information on topics such as customs, traditional instruments, folk tales, and more. Users can also complete their identification data on the profile page, enriching their cultural knowledge through an interactive experience.

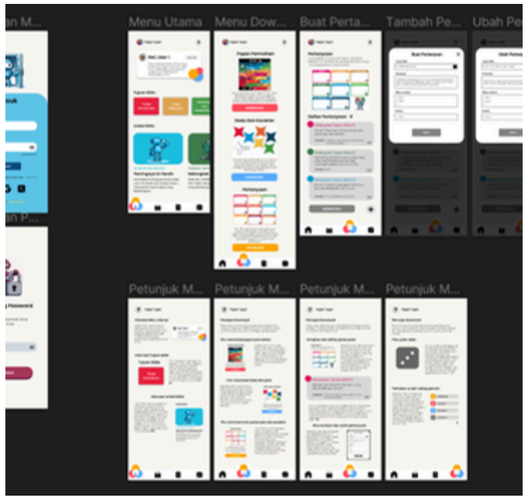
- Purpose: Designed for the registration of the Internal Selection for LIDM at Universitas Negeri Malang.
- Year: Initially for 2023, updated for 2024.
- Functionality: Streamlines the registration process for participants.
- Improvements: Enhances user accessibility and overall functionality for the 2024 selection.

03. UI/UX

The Paper Tuper Android app is a game designed to promote sustainable development goals (SDGs). After analyzing societal issues, the app concept was developed, with features informed by user research. Figma was used to create the prototype due to its accessibility and functionality.







04. RAMA QUEST

"Rama's Quest: Misi Penyelamatan Sinta" is a Unity game built with C#, where players control Rama on a mission to rescue Sinta from Rahwana. Inspired by the Ramayana, the game can be adapted into different formats, including platformers and RPGs.out the 20th century



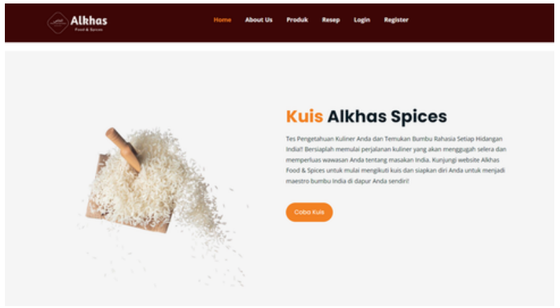


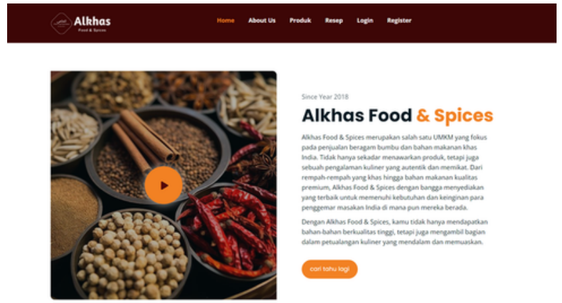


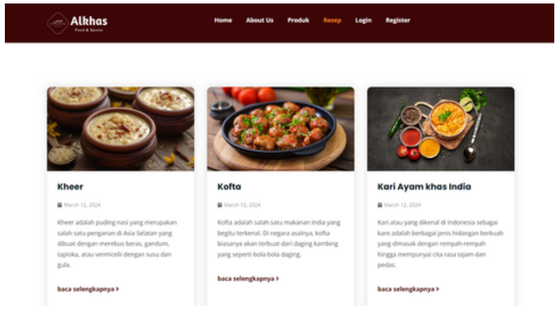
05. ALKHASSPICES

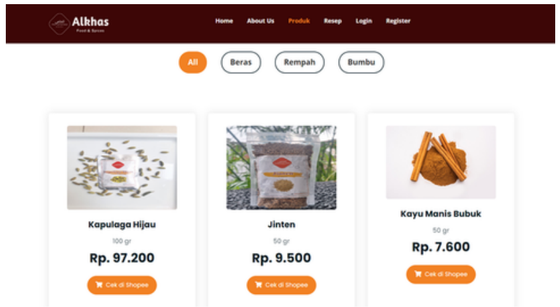
AlkhasSpices is a marketing platform for UMKM Alkhas Food & Spices, designed to enhance sales of their unique Indian spices. The website allows users to explore and purchase various spices while serving as a resource for authentic Indian recipes. It combines a seamless shopping experience with culinary information, offering features like a homepage, login and registration pages, an About Us section, product and recipe collections, detail pages, a quiz section, user profiles, and an admin dashboard for managing recipes, products, discounts, and user accounts.





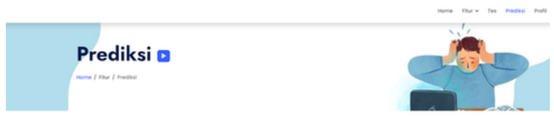






06. PESI



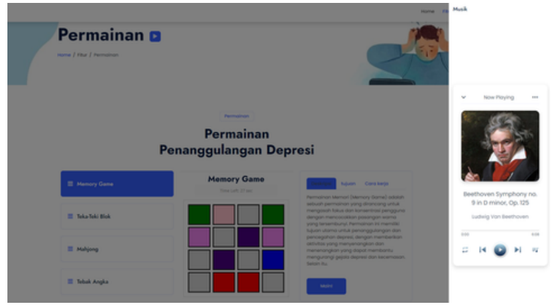












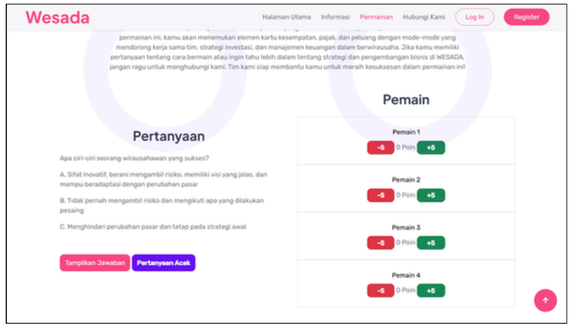
The PESI website project uses the Fuzzy Naïve Bayes algorithm, combining Naïve Bayes classification with Fuzzy logic to improve mental health diagnostics, especially in detecting depression symptoms. Built with Laravel, PESI ensures accessibility across various devices, allowing students to seek support anytime. The platform integrates gamification to increase engagement and AI technology to deliver timely and personalized assistance. The project aims to lower untreated depression cases and reduce suicide rates among students, creating a more supportive and mentally healthy campus environment.

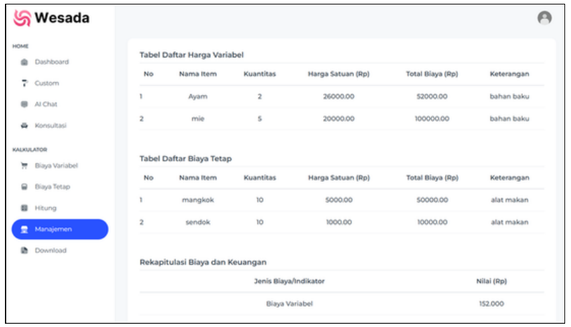
- Silver Medalist, Indonesia Inventors Day 2024 (Aug 2024)
- First Place, HACKATHON SDGs UM 2024 (Jun 2024)

07. WESADA







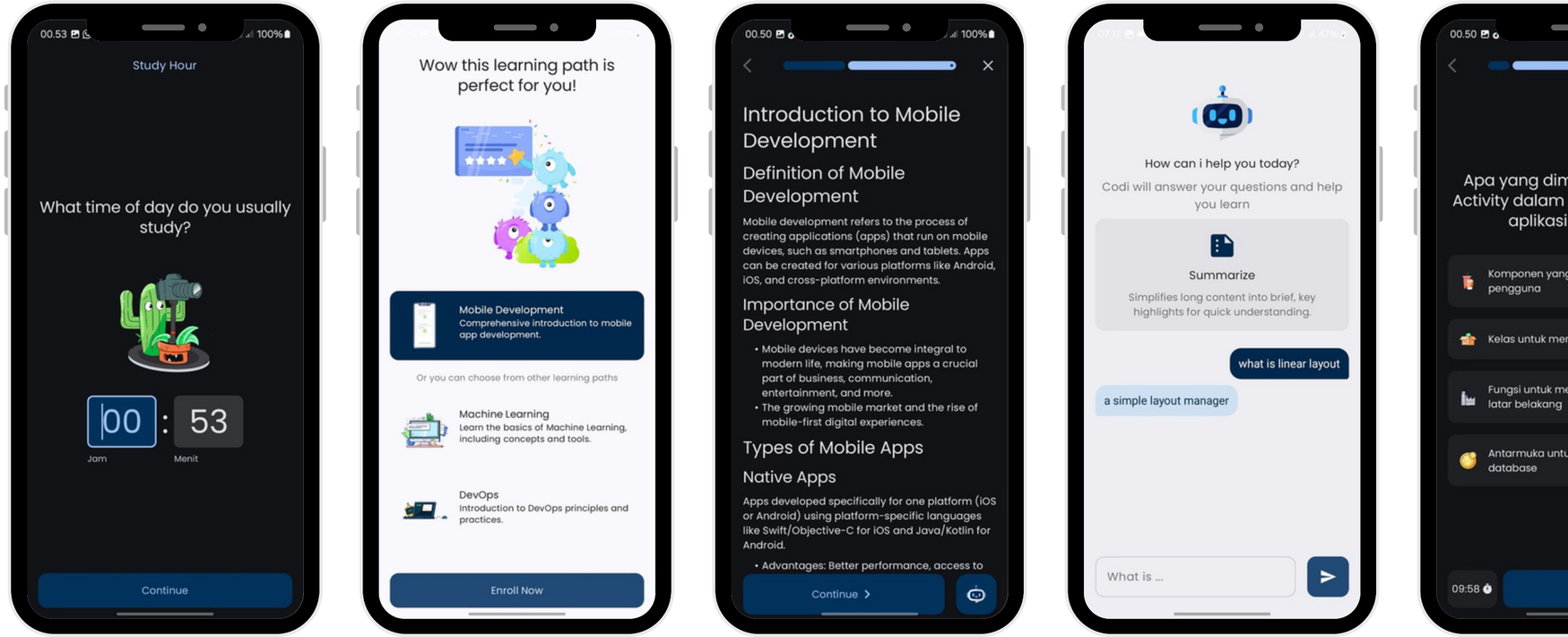




WESADA is an interactive board game integrated with a website, designed to help users understand and practice entrepreneurship, financial management, and investment. The integrated website not only serves as an information source but also provides a technology-based entrepreneurship learning kit leveraging Artificial Intelligence (AI). Through this integration, users can access various additional learning features, including comprehensive modules on entrepreneurship, SWOT analysis, and Budget Plan (RAB) calculations. This approach enables a personalized and adaptive learning experience, where Artificial Intelligence tailors the materials according to each user's progress. Consequently, WESADA aims to equip young people and communities with relevant entrepreneurial skills, preparing them to face real-world business challenges while fostering sustainable economic growth.

08. CODILEAP

CodiLeap: Learn Smart, Leap Higher delivers an intelligent learning experience through its summary and Q&A features, designed to enhance students' understanding efficiently. The summary feature automatically generates concise overviews of learning materials, allowing students to grasp key concepts quickly and focus on essential ideas. Meanwhile, the Q&A feature, powered by advanced AI models, provides real-time answers to questions, offers detailed explanations, and resolves confusion during the learning process. These features work together to create a more guided, interactive, and personalized learning experience, empowering students to leap further in their educational journey.



MY ORGANIZATION

Workshop Elektro (WSE) is a Semi-Autonomous Organization (LSO) under the Student Association of the Department of Electrical and Informatics Engineering (HMDTEI) at Universitas Negeri Malang, focused on developing both soft and hard skills in the fields of electronics, electrical engineering, informatics, and entrepreneurship.



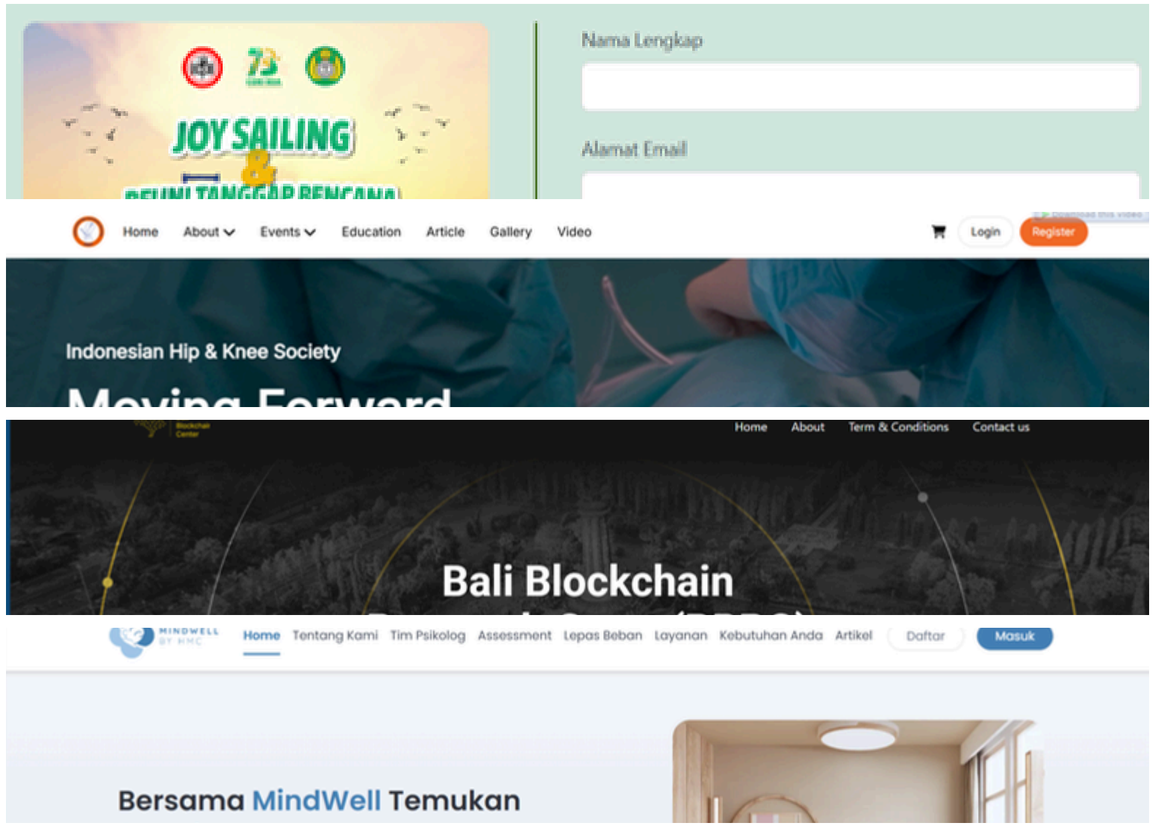






MY INTERNSHIP PROJECT

PT Bintang Multiteknologi



09. JOY SAILING

Joy Selling is a web-based event registration and e-ticketing platform designed to digitize and streamline participant management. The system replaces manual registration processes with an integrated database-driven solution.

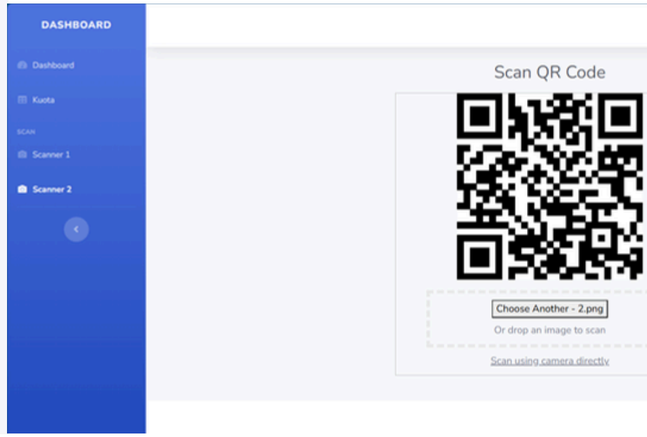
The platform enables:

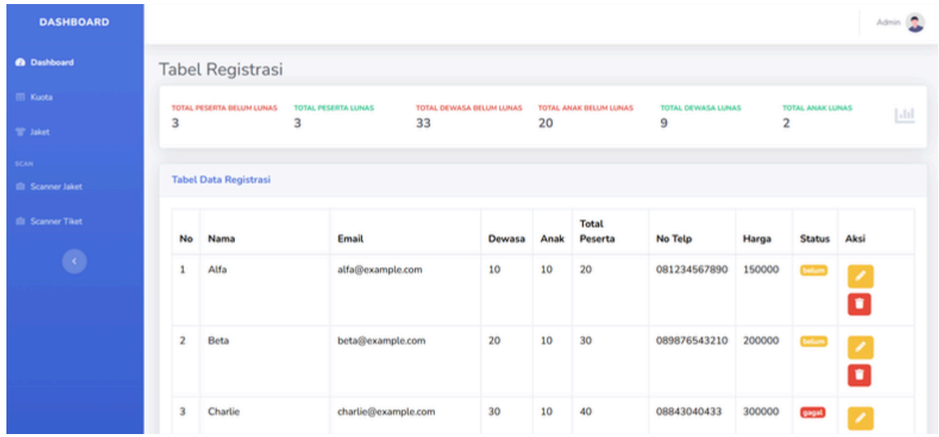
- Online participant registration
- Admin-based participant management
- QR Code-based attendance validation
- Data export for administrative purposes

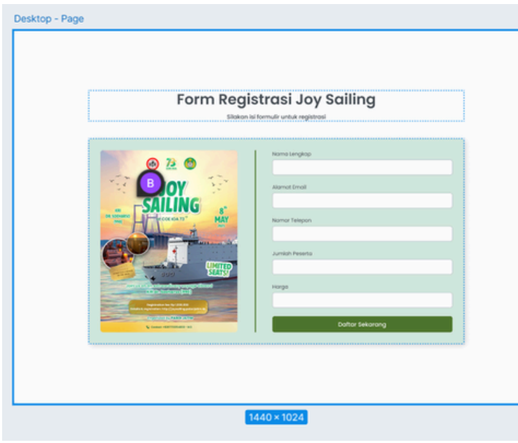
System Architecture

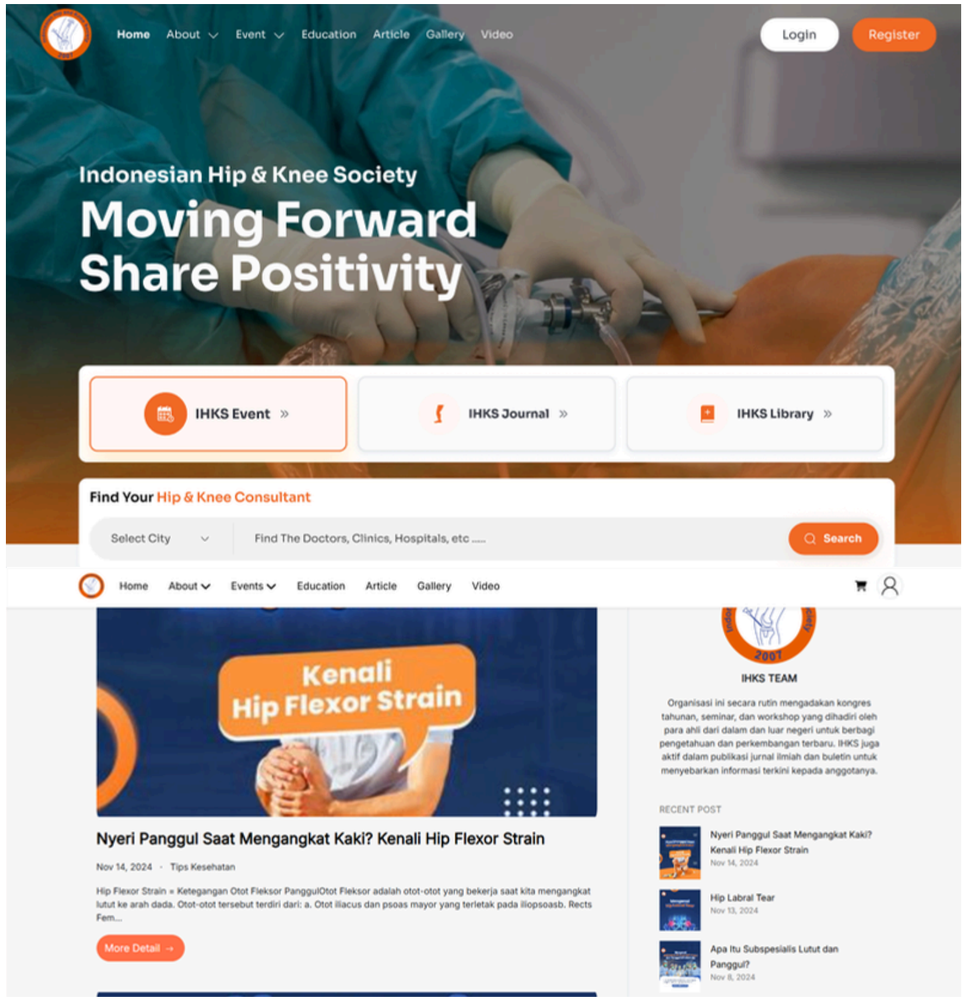
- Backend: Laravel (MVC architecture)
- Database: MySQL
- QR Code Generation: Imagick library
- Email Integration: Automated QR delivery via email
- Admin Panel: Role-based dashboard











10. INDONESIA HIP & KNEE SOCIETY (IHKS)

This project involved redesigning the IHKS organizational website to modernize its UI/UX while maintaining compatibility with the existing backend system. The goal was to create a more responsive, user-friendly, and visually professional platform.

Key Contributions

UI Implementation

- Converted Figma designs into responsive HTML and CSS
- Implemented Bootstrap grid system for responsive layout
- Ensured cross-device compatibility (desktop, tablet, mobile)

Backend Integration

- Adjusted CodeIgniter controllers and views to match new UI structure
- Refactored data rendering logic to align with updated layouts
- Improved page loading efficiency

Member Dashboard Enhancement

- Redesigned dashboard layout for improved usability
- Optimized navigation structure
- Enhanced overall user experience

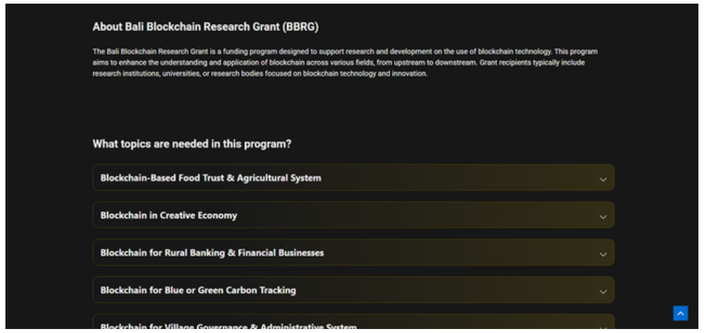
11. BALI BLOCKCHAIN CENTER – BBRG 2025

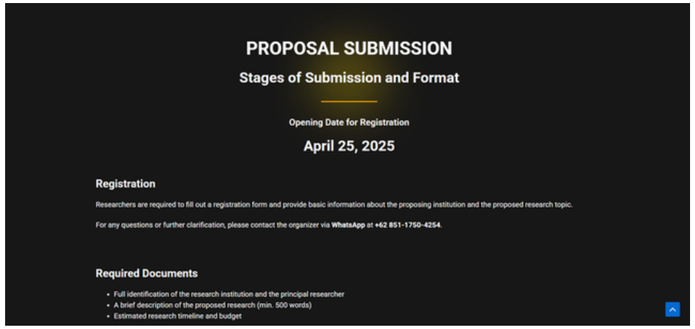
Developed a WordPress-based event website to support the Bali Blockchain Research Grant (BBRG) 2025 program. The objective was to provide structured event information with a modern and responsive design.

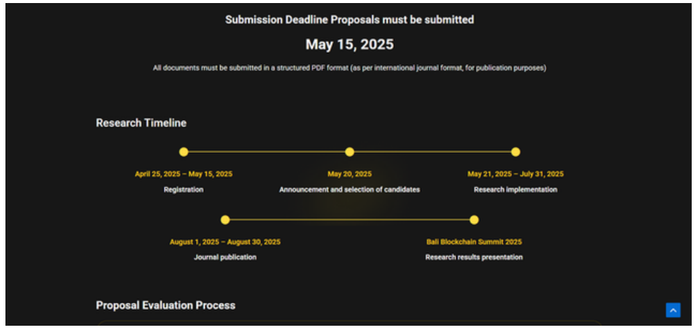
Key Contributions

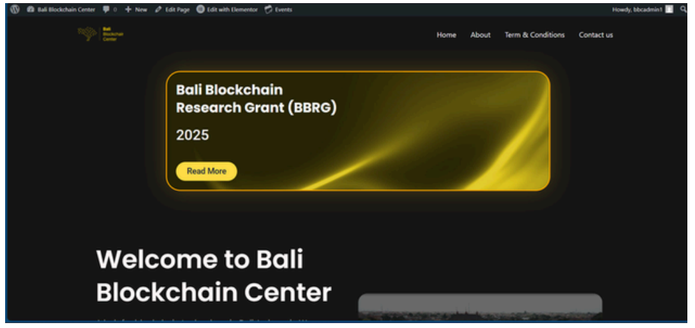
- Implemented Figma-based designs into WordPress templates
- Customized layout and styling using HTML & CSS
- Structured content hierarchy for better user navigation
- Ensured responsive performance across devices
- Optimized visual components for clarity and branding consistency

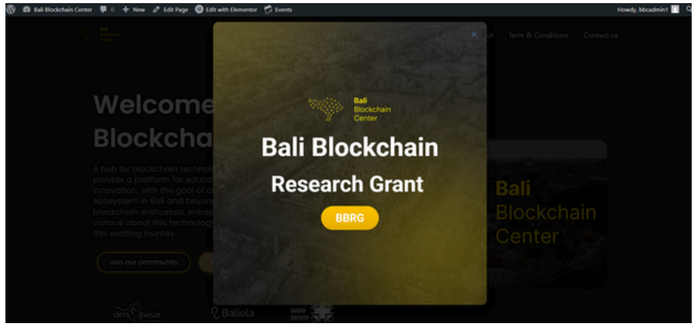


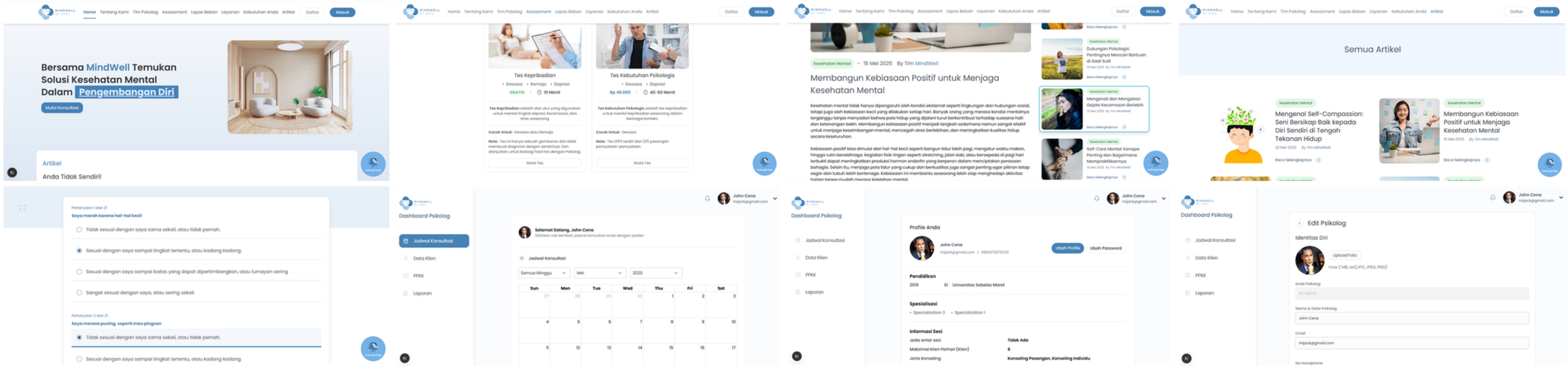












12. MINDWELL

MindWell is a web-based mental health consultation platform that connects users with professional psychologists through a digital scheduling system. The system was developed collaboratively in a team-based environment.

Frontend Development

- Converted Figma designs into reusable Next.js components
- Implemented responsive layouts using Tailwind CSS
- Integrated dynamic API-driven data rendering

Backend Support

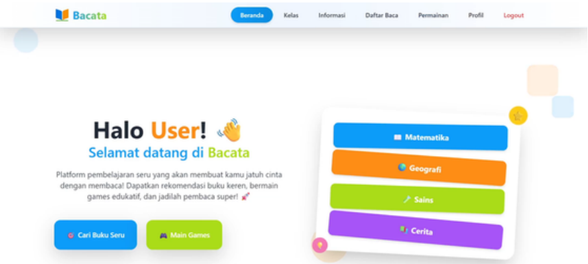
- Assisted in user data management implementation
- Contributed to consultation scheduling system logic
- Integrated REST API endpoints with frontend components
- Performed API testing and debugging

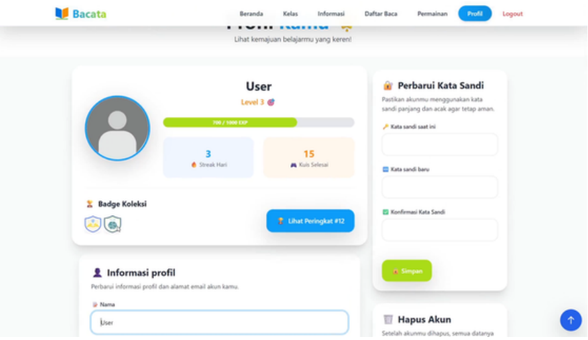
13. BACATA

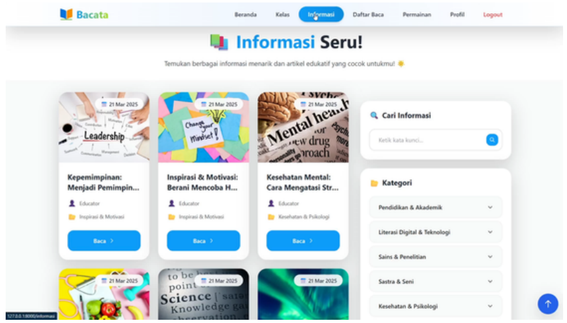
BACATA is a web-based literacy learning platform that integrates Generative AI, Machine Learning, Focus Detection, and Gamification to enhance reading comprehension for 4th–6th grade elementary students aligned with the Merdeka Curriculum.

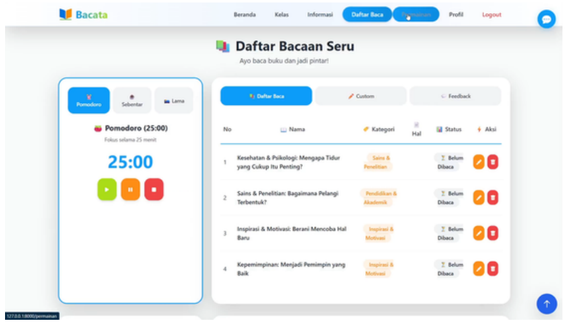
The platform was developed as a solution to low reading literacy levels by implementing a data-driven adaptive learning approach. The system analyzes students' reading patterns, predicts literacy levels, and provides personalized content recommendations.

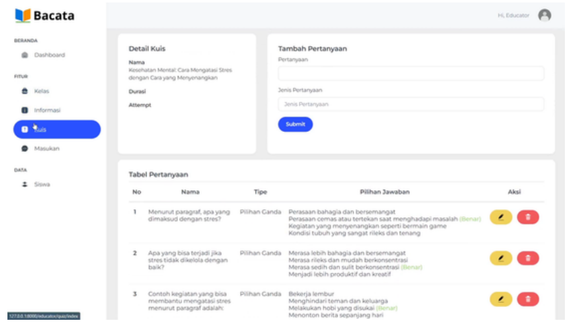
- Reading Pattern Analysis – Tracks reading behavior to deliver adaptive recommendations.
- Literacy Level Prediction – Classifies students into skill levels based on reading and quiz data.
- Generative AI – AI summaries, auto-generated quizzes, and a learning assistant chatbot.
- Focus Detection – Identifies distractions to improve concentration.
- Gamification – Points, badges, leaderboards, and Pomodoro sessions to boost engagement.
- Dashboard – Real-time progress monitoring for teachers and parents.

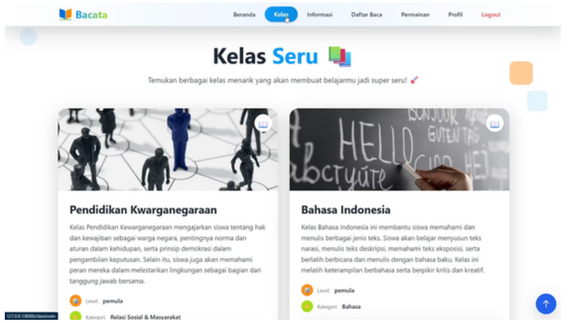






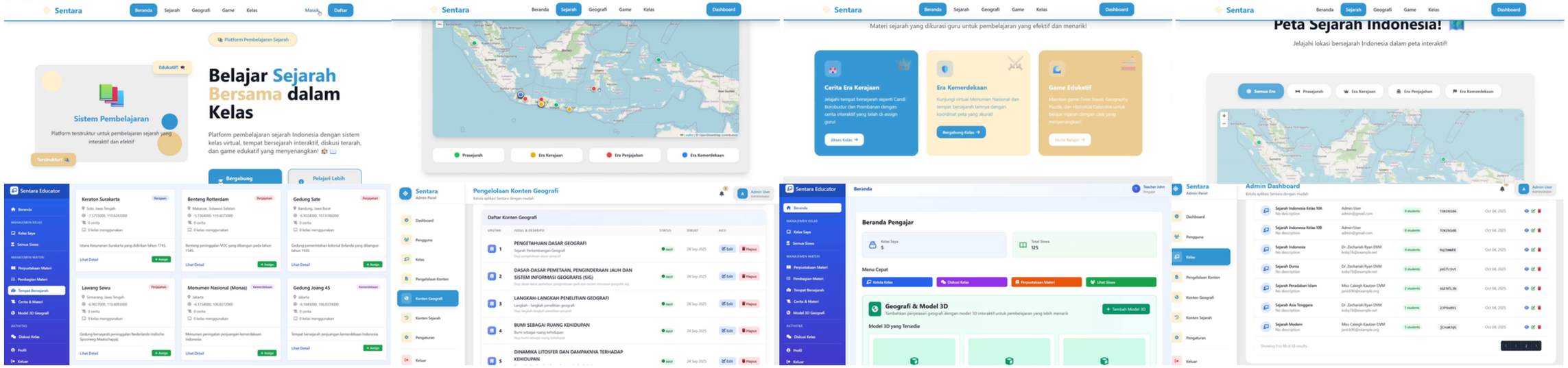






14. SENTARA

SENTARA (Sejarah Nusantara) is a web-based interactive learning platform designed for Grade 10 high school students that integrates History and Geography through a Game-Based Learning approach aligned with the Merdeka Curriculum (Phase E). The platform transforms traditional lecture-based instruction into an engaging digital experience by combining interactive maps, branching storytelling, quizzes, and educational games such as Time Adventure, Puzzle Nusantara, and History Detective. Built using Laravel, MySQL, Bootstrap, and JavaScript, SENTARA includes a class management system for teachers, a content management system (CMS) for administrators, and gamification features such as points, badges, and leaderboards to enhance student engagement. I developed the full-stack architecture, implemented interactive learning modules and quiz logic, and built the educator dashboard using an Agile development approach. This project was awarded 2nd Place in the IT-Based Learning Media Competition organized by the Faculty of Social Sciences, Universitas Negeri Malang (FIS UM).



15. WAYANG

This project analyzes Indonesian wayang stories using Natural Language Processing (NLP). The main goal is to automatically generate summaries and detect important entities such as character names and locations.
The system uses IndoT5 for text summarization and IndoBERT for Named Entity Recognition (NER). Both models are implemented using the Hugging Face Transformers library.
In addition to text processing, the system also visualizes detected characters using wayang images and displays relationships between entities in a graph.

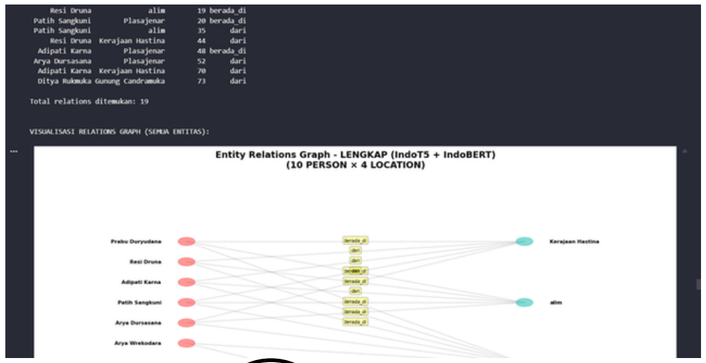
System Workflow

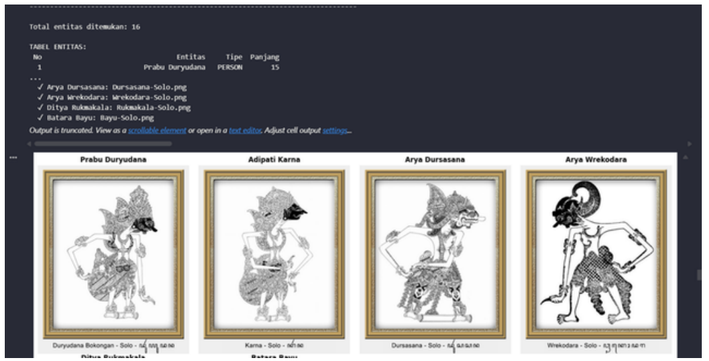
1. Data Collection
2. Collected 96 Indonesian wayang stories.
3. Dataset Experiment
4. The dataset was divided into three scenarios:

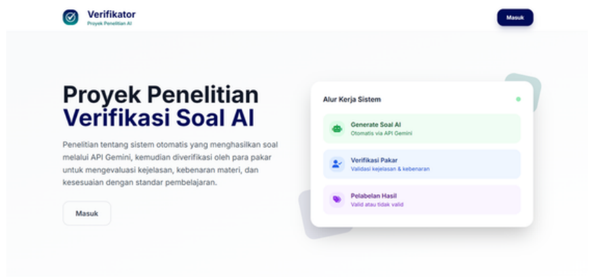
- Full dataset (96 stories)
- Half dataset (48 stories)
- Quarter dataset (24 stories)

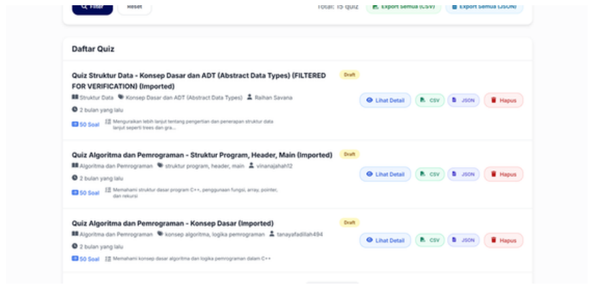


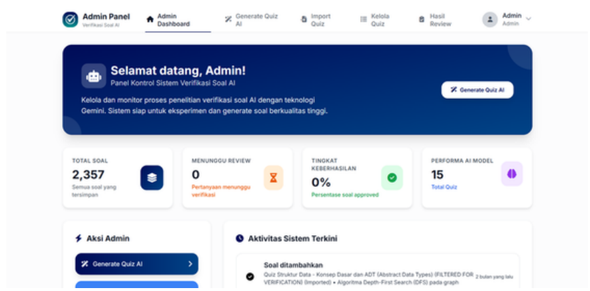






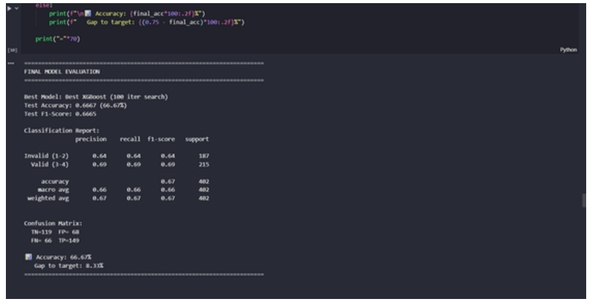










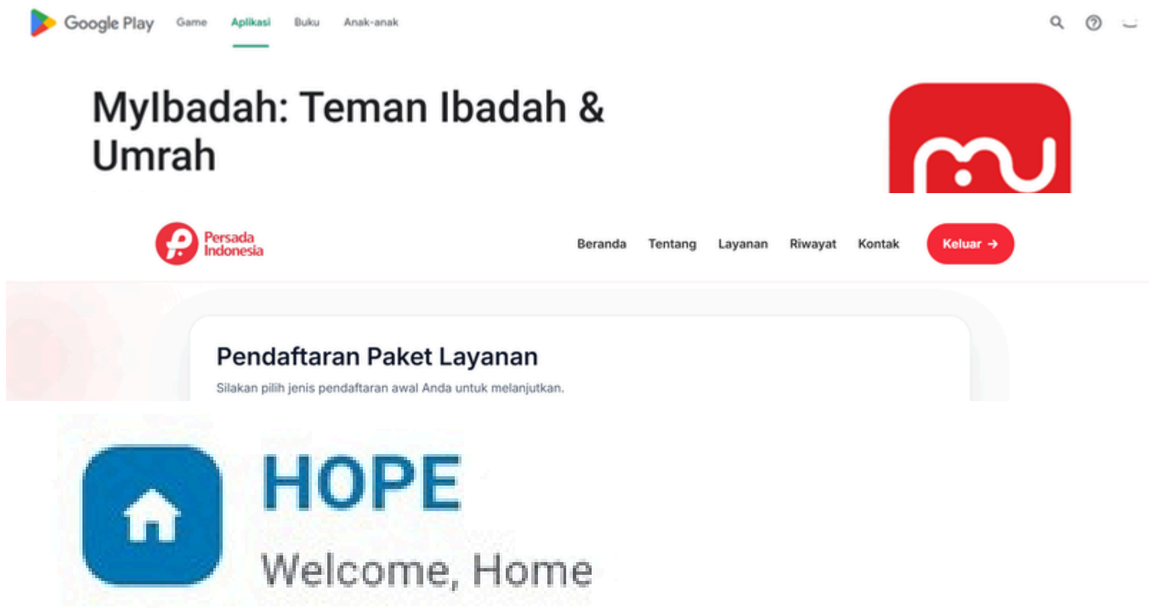


16. AUTOMATED TECHNICAL QUALITY CLASSIFICATION OF AI-GENERATED MCQS

This thesis develops an automated system to evaluate the technical quality of AI-generated multiple-choice questions (MCQs) based on established item-writing principles. The research addresses common issues in AI-generated assessments, particularly unclear stems and ineffective distractors that may reduce validity and reliability.

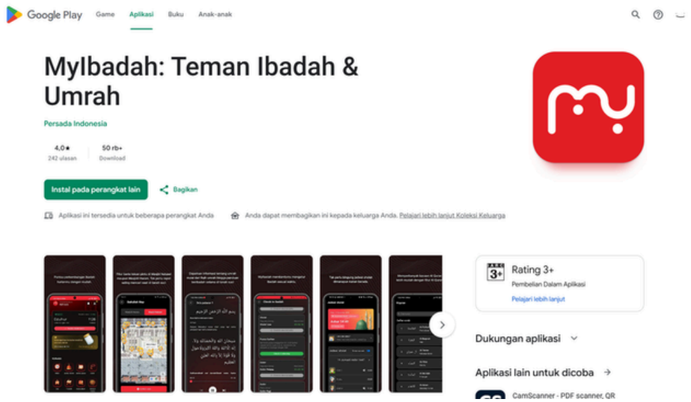
The system combines semantic embeddings using Sentence-BERT (SBERT) with TF-IDF feature extraction and applies XGBoost for classification. I conducted the research end-to-end, including dataset preparation, feature engineering, model development, and evaluation.

MY WORK PROJECTS AND FREELANCERS



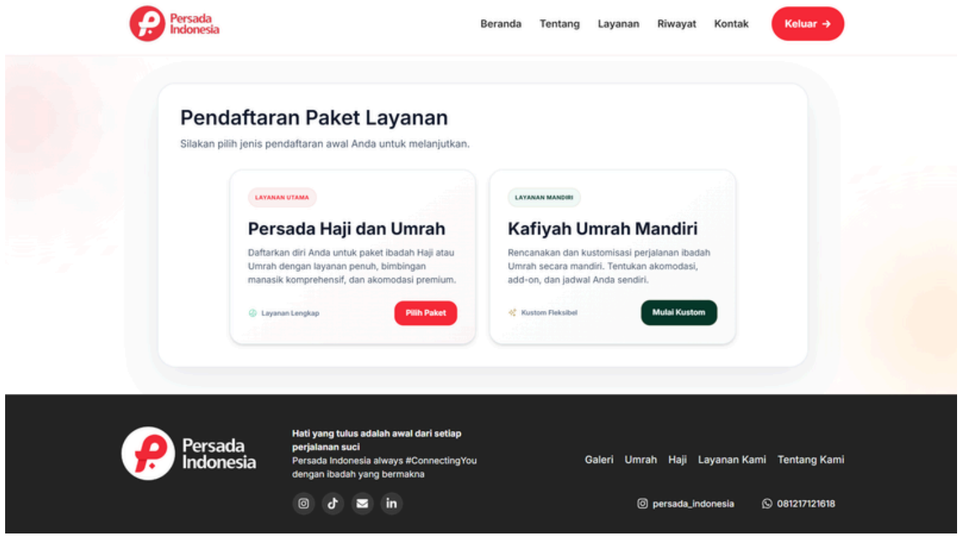
16. MYIBADAH

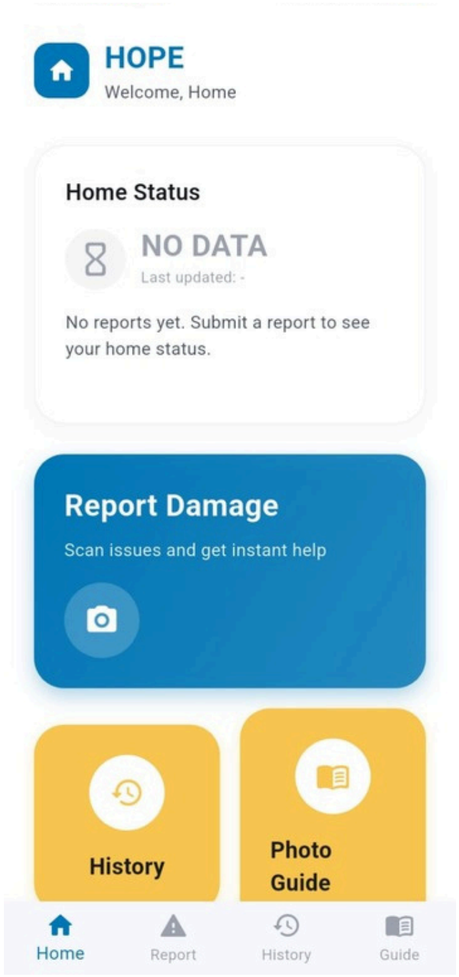
Contributed as a Backend Developer for MyUmrah, an AI-powered Umrah companion application designed to assist pilgrims before and during their pilgrimage. Responsible for designing and developing RESTful APIs that power core features such as daily Islamic quotes, prayer times, worship guidance, and other application services. Built and maintained datasets of mosques, religious landmarks, and points of interest in Makkah and Madinah by collecting, parsing, and scraping data from multiple external sources. These services provide users with accurate, structured, and up-to-date information to enhance their Umrah experience.

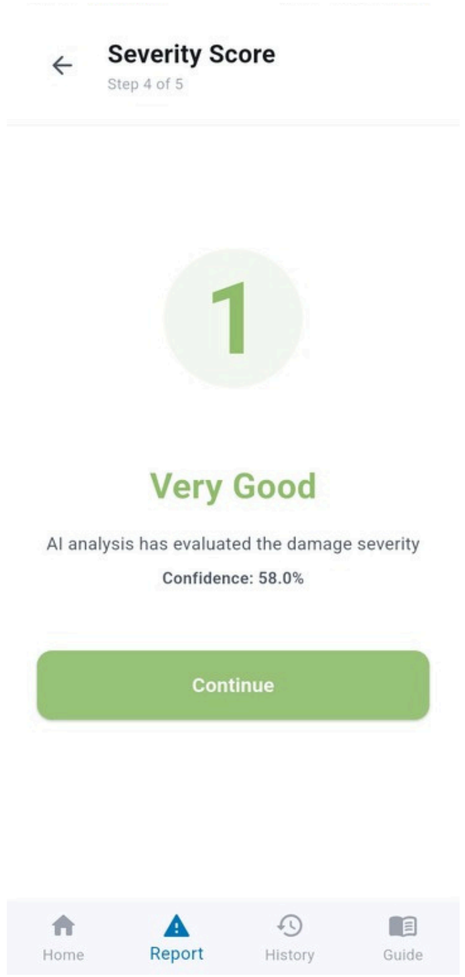


17. POS PERSADA

Contributed as a Full-Stack Developer for the Persada Indonesia POS and Umrah Mandiri Kafiyah web applications. Developed responsive user interfaces and integrated RESTful APIs to support the online purchase of Umrah and Hajj travel packages. Collaborated with the backend services to ensure seamless data flow for package management, booking, customer information, and transaction processes, delivering a smooth and reliable user experience.

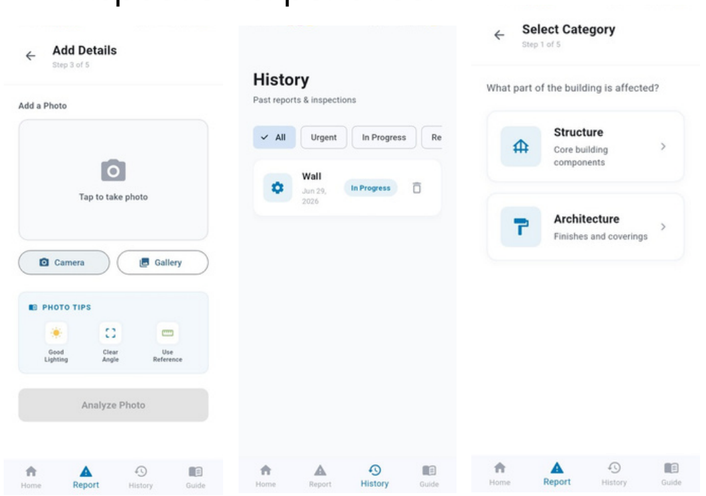






18. HOPE

Developed HOPE as a freelance project, a cross-platform property inspection and damage reporting application built with Flutter for mobile and desktop platforms. Designed and implemented the application from end to end, including responsive user interfaces, inspection workflows, damage reporting, report history, and maintenance resources. Integrated an on-device TensorFlow Lite (TFLite) model to provide AI-assisted property damage classification from uploaded images, delivering an efficient and user-friendly inspection experience.



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