FIRMAN MATHEUS PANE

Parsoburan, Toba, North Sumatera, 22383 | (+62)822-7324-3039
firmanpane27@gmail.com | https://www.linkedin.com/in/firman-pane-a65863392/ | https://github.com/MatheusPane

I am an Information Technology associate degree student at Institut Teknologi Del with hands-on experience as a full-stack developer, delivering real-world web and mobile applications for villages, cafes, and companies. Experienced in the full software development lifecycle covering requirements analysis, system architecture, frontend and backend development, database design, testing, and deployment. Strong technical exposure to modern web/mobile frameworks, RESTful API development, and relational databases. Currently seeking a Software Engineer Internship to contribute to impactful projects, apply practical skills in a professional environment, and further develop through guidance from industry experts.

WORK EXPERIENCE

PT LPK Mori Silangit — Remote - Sumatera Utara
Part-time Web Developer — Agustus 2025 – December 2025

- Developed a company profile website integrated with an information system and online student registration platform
- Built a multilingual website (Japanese, English, Indonesian) with dynamic language switching
- Designed responsive UI and page layouts to support company branding
- Collaborated with the internal team to refine business requirements and deliver production ready features

EDUCATION

Del Institute of Technology — Toba, North Sumatra
Associate Degree in Information Technology — September 2023 – September 2026
(3.26/4.00)

ORGANIZATIONAL & EXPERIENCE

- **Himpunan Mahasiswa Teknologi Informasi (HIMATIF) - *Chairman*** — Himpunan Mahasiswa Teknologi Informasi IT Del, December 2025 – June 2026
- **Student Leadership Program – *Participant*** — Institut Teknologi Del, August 2024 – July 2025
- **Discrete Mathematics – *Teaching Assistant*** — Institut Teknologi Del, February 2025 – June 2025
- **AI CAREER BOOST SEMINAR with IT DEL - *Committee*** — Institut Teknologi Del, November 2025

SKILLS

- **Programming Language:** C, C#, Java, Python, Golang, JavaScript, TypeScript, Dart, PHP
- **Framework & Libraries::** Laravel, FastAPI, React.js, NodeJs, NextJs, Streamlit, Flutter, Vite, TailwindCSS.
- **Testing Tools:** Manual Testing, Selenium, Katalon, Cucumber (RobotFramework, Playwright, Cypress) Postman, White Box and Blackbox Testing, Appium,
- **Database Management:** MySQL, PostgreSQL, SQLite,MongoDB
- **Clouds**: Amazon Web Services & Google Cloud Service
- **Others:** Git, Github, Trello, Software Development Life Cycle (SDLC), BPMN, Figma, Balsamic, CRISP-DM, Business Model Canvas (BMC), Market & Stakeholder Analysis, Creative & Entrepreneurial Thinking

Certification

- **Applied Data Science Capstone**
- **IBM Data Science**

Project Undertaken During Study

1.	**Project Name**	:	Deepfake Detection Web App with CNN ResNet-18 & Grad-CAM
	Period	:	October 2025 – December 2025
	Description	:	A web-based Deepfake Detection application that classifies facial images as *Real* or *Fake* using a fine-tuned ResNet-18 Convolutional Neural Network. The system includes an explainability feature using Grad-CAM heatmap visualization, highlighting manipulated regions on the input face. Models are served locally using Streamlit as a lightweight web interface, enabling users to upload images and obtain predictions with confidence scores and visual explanation overlays.
	Tools & Skills	:	Python · PyTorch · Transfer Learning · Streamlit · OpenCV · Grad-CAM · Machine Learning Model Deployment · VS Code
	Role	:	Machine Learning Engineer
	Responsibility	:	1. Dataset preparation and preprocessing (augmentasi, resize, normalization). 2. Building and fine-tuning ResNet-18 deep learning model for binary classification (Real/Fake). 3. Implementing Grad-CAM heatmap visualization to identify manipulated facial regions. 4. Integrating the trained model into a Streamlit-based web application. 5. Designing the UI for image upload, prediction result display, and visual explanation. 6. Performing evaluation, testing, and optimization for deployment.
2.	**Project Name**	:	Del Café Management and Service System
	Period	:	January 2025 - July 2025
	Description	:	A multi-platform café management and customer service system. The admin dashboard is built using Laravel + Inertia.js, enabling administrators to manage menus, inventory, transactions, and reports. A high-performance Golang REST API serves as the backend service layer for the mobile application. The customer-facing application is developed using Flutter, allowing users to browse menus, place orders, check order status, and manage their account. The system utilizes MySQL as the primary database for all data operations.
	Tools & Skills	:	Laravel · Inertia.js · Golang · Flutter · REST API Development · MySQL · MVC Architecture · Mobile Application Development · JSON Integration · Token-Based Authentication · Full-Stack Development
	Role	:	Fullstack Developer

	Responsibility	:	1. Designed the overall system architecture integrating Laravel–Inertia.js (Admin Panel), Golang REST API (Backend), and Flutter (Mobile Application). 2. Developed the admin dashboard using Laravel + Inertia.js for menu CRUD, transaction management, reporting, and user administration. 3. Built optimized REST API services in Golang for order processing, authentication, and real-time order status. 4. Developed the Flutter-based customer app for menu browsing, order placement, and viewing order history. 5. Designed and maintained the MySQL database schema for menus, orders, payments, and user accounts. 6. Integrated secure authentication and communication between Flutter and Golang API.
3.	**Project Name**	:	Design and Development of the Dasawisma-PKK information system in Silalahi Dolok village.
	Period	:	August 2025 – January 2026
	Description	:	A comprehensive web application developed to digitize Indonesia's PKK (Family Welfare Movement) programs at the village level. The system fully replaces paper-based family and Dasawisma recording with automated calculation of national PKK indicators, real-time data aggregation, and generation of official printable reports compliant with PKK Central Committee standards (Form Dasawisma and Family Record Book).
	Tools & Skills	:	Laravel 12 (PHP), PostgreSql, Eloquent ORM, Blade Templating, Bootstrap 5, Tailwind CSS, Carbon, Laravel Migration & Seeder, Spatie Laravel-Permission, HTML-to-PDF ready printing
	Role	:	Full-Stack Web Developer
	Responsibility	:	1. Designed and implemented complex relational database architecture covering citizens, families, family members, Dasawisma groups, PKK activities, and reference data 2. Built role-based authentication and authorization system (Admin & PKK Cadre) with middleware and policies 3. Developed dynamic family and citizen data entry modules with many-to-many and polymorphic relationships 4. Created official report generation with pixel-perfect layout: - Dasawisma Recapitulation Form (exact format required by PKK Headquarters) - Individual Family Record Book (Catatan Keluarga PKK) 5. Engineered browser-based direct PDF printing with precise formatting for official submission 6. Developed dynamic village configuration module (village name, sub-district, regency, reporting year)
4.	**Project Name**	:	Cinema Ticketing & Seat Reservation System
	Period	:	January 2024 - May 2024
	Description	:	A desktop-based cinema ticketing application designed to manage movie schedules, process ticket sales, and handle dynamic seat selection. The system allows users to select available seats, calculate total payments automatically, and print ticket receipts. It also includes an admin module for managing movie data and showtimes.
	Tools & Skills	:	Java, Eclipse IDE, PostgreeSQL, JDBC, OOP, Java Swing
	Role	:	Backend & Frontend Developer

	Responsibility	:	1. Developing ticket sales features with dynamic seat selection and availability validation 2. Implementing payment calculation mechanism including total price and ticket quantity 3. Creating ticket printing module for customer receipt generation 4. Designing database structure and integrating with PostgreSQL 5. Implementing movie data management (create, update, delete showtimes) 6. Building a graphical user interface using Java Swing
5.	**Project Name**	:	Easy Drive Wisata – Smart Mobility for Travelers
	Period	:	Oktober 2025 - December 2025
	Description	:	A business innovation project focused on developing a tourism mobility service that offers convenient, reliable, and user-friendly car rental solutions for domestic and international travelers. The project involves designing a complete Business Model Canvas and creating a digital service concept to enhance mobility experiences in tourism destinations.
	Tools & Skills	:	Figma, Business Model Canvas (BMC), Market Research, Stakeholder Analysis, Entrepreneurial Thinking, Service Design, Branding & Concept Development
	Role	:	Business Concept Strategist
	Responsibility	:	1. Conducting market research and validating mobility-related business opportunities in the tourism sector 2. Developing the Business Model Canvas covering value proposition, customer segments, channels, revenue streams, and operational structure 3. Designing and presenting the business concept along with a digital service prototype to academic evaluators and stakeholders
6.	**Project Name**	:	Mobile Quiz Application
	Period	:	October 2024 – December 2024
	Description	:	A mobile application development project focused on building an interactive quiz platform using Flutter (Dart) integrated with Firebase as the backend service. The system includes two main roles: an admin who manages quiz categories and questions, and a user who answers questions based on selected categories. The project emphasizes real-time data management, responsive UI design, and scalable cloud integration.
	Tools & Skills	:	Flutter (Dart), Firebase Authentication, Firebase Firestore, Firebase Storage, Mobile App Architecture.
	Role	:	Mobile App Developer
	Responsibility	:	1. Designing and developing the mobile quiz application using Flutter with cloud-based backend integration 2. Implementing admin features to create, update, and manage question categories, questions, and answer options. 3. Building user modules for selecting categories, answering questions, and tracking quiz results. 4. Integrating Firebase Authentication and Firestore for secure, real-time data storage and retrieval.
7.	**Project Name**	:	Design and Development of drg. Nancy Clinic Website
	Period	:	January 2024 – June 2024
	Description	:	A full-stack web development project focused on building an online clinical service platform for drg. Nancy Clinic using Laravel and Bootstrap 5. The system includes three access roles Admin, User, and Guest to support clinic information management, appointment interactions, and public access to dental service information. The project emphasizes clean UI design, secure authentication, and structured role-based access control.
	Tools & Skills	:	Laravel Framework, PHP, Bootstrap 5, MySQL, Blade Templating, MVC Architecture, RESTful Web Development, Role-Based Access Control (RBAC)
	Role	:	Full-Stack Web Developer

	Responsibility	:	1. Developing the website structure using Laravel with MVC architecture and Blade-based frontend views. 2. Implementing role-based access for Admin, User, and Guest including authentication and authorization logic. 3. Building admin features for managing clinic services, schedules, content, and testimoni. 4. Designing responsive and user-friendly UI using Bootstrap 5. 5. Conducting system testing, debugging, and deployment preparation.