MOCHAMMAD KHOIRULLUTFANSYAH

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Bandung, Indonesia

AI Engineer & Backend Developer with 8 months of internship experience. Specialized in Python, PostgreSQL, TensorFlow, and Docker to develop and deploy scalable business solutions. A proactive Fresh Graduate with proven leadership and communication abilities from various organizational roles. Committed to bridging the gap between Machine Learning and backend infrastructure to drive business growth

EDUCATION

Telkom University – Bandung, Indonesia
Bachelor of Informatics (S1) | GPA: 3.82/4.0   **September 2022 – January 2026**
Relevant Courses: Algorithms & Data Structures, Machine Learning, Database Systems, Object Oriented Programming, Probability and Statistics, Discrete Mathematics, Calculus, Cross Platform Applications, Process Mining

WORK EXPERIENCE

AI Engineer Internship – Telkom Indonesia   **September 2025 – January 2026**
- Built an end-to-end digital literacy web application featuring a multimodal hoax detection system to identify misinformation across various media formats and deploy it to VPS.
- Developed fine-tuned an IndoBERT model using TensorFlow, achieving 0.97 F1 Score in detecting Indonesian-language hoax through advanced Natural Language Processing (NLP) techniques.
- Built backend and deployment of both the ML model and the web application, ensuring a seamless and scalable user experience.
- Implemented auxiliary features, including a user feedback loop, to continuously gather data for future model retraining and performance monitoring.

Software Developer Internship – Telkom Indonesia   **June 2025 – September 2025**
- Built an automated scheduling system for 30+ multi-shift agents using Google OR-Tools, effectively eliminating manual planning and optimizing operational efficiency through constraint programming.
- Developed a web application using Node.js to digitalize agent scheduling requests, streamlining data integration and ensuring high data validity across the system.
- Built the supporting API and containerized the application using docker to ensure consistent and streamlined deployment and deploy it to cloud VPS.

Teaching Assistant – Telkom University
Calculus   **January 2024 – September 2024**
- Guided 40+ students in understanding programming concepts and problem-solving.
- Conducted tutorial sessions and graded assignments/exams.

Algorithm & Programming   **October 2024 – January 2025**
- Assisted in teaching 80+ students fundamental calculus concepts.
- Provided academic support through discussion sessions and assessments.

PROJECT

PerahuAI
- Multimodal detection system that identifies hoaxes and misinformation from three types of inputs: URLs, Text, and Images.
- URL Analysis: Detects suspicious links and common cyber threats like typosquatting (fake domains).
- Text Detection: Uses a fine-tuned IndoBERT model with a 0.97 F1 Score to classify Indonesian-language hoaxes accurately.
- Image Processing: Extracts text from images using OCR for further analysis, and includes a Deepfake detection feature for images without text.
- Full-stack implementation: Built the backend, managed the integration, and deployed the entire application to a Cloud VPS using Docker.

Scheduling Webapp
- Automated scheduling system designed to manage and optimize shifts for 30+ agents simultaneously.
- Optimization Engine: Powered by Google OR-Tools to automatically generate schedules, replacing manual planning and reducing errors.
- Digital Submission Portal: A web application built with Node.js to digitize schedule requests, ensuring all data is integrated and valid.
- Multi-shift Management: Handles complex scheduling requirements, including various shift patterns and agent availability.
- Deployment: Containerized the application using Docker for consistent performance and deployed it to a Cloud VPS.

Klungkung Tourism Chatbot
- Developed a chatbot designed to provide information about accommodations and tourist destinations in Bali using Retrieval-Augmented Generation.
- Implemented LangChain with a Multi Vector Retriever to improve the accuracy of information retrieval from various data types.
- ChromaDB to store and manage high-dimensional embeddings for efficient and relevant search results.
- Deployed the application on Vercel, ensuring a responsive and accessible interface for users.

ORGANIZATIONS

Informatics Student Association
Head of Mentor Community   **April 2024 – December 2025**
- Led and managed the "IFTAR" program, a strategic initiative connecting student tutors with peers in need of academic support, overseeing 72 active study groups.
- Optimized organizational workflow by developing and implementing new Standard Operating Procedures (SOPs) for administrative tasks, effectively eliminating job overlaps and improving team coordination.
- Scaled the "ResponsiF" (intensive exam preparation) program by 150% by establishing cross-functional collaborations with campus laboratories and student organizations, increasing frequency to 3 sessions per period with an average of 3 subjects per session.
- Resolved long-standing recruitment and budget challenges by renegotiating tutor honorariums and implementing a mandatory service scheme, ensuring program sustainability and cost-efficiency.

Computing Laboratory – Faculty of Informatics, Telkom University   **October 2024 – December 2025**
Assistant Laboratory
- Mentored 50+ students in Machine Learning (ML) and Data Structures & Algorithms (DSA), delivering technical materials and guiding practical lab sessions to ensure deep conceptual understanding.
- Collaborated in curriculum development for ML and DSA courses, designing comprehensive modules and hands-on assignments.

Badan Mentoring
Event Division Member   **December 2024 – June 2025**
- Project Managed multiple large-scale seminars for 150+ participants, overseeing the entire event lifecycle from initial planning to successful execution.
- Coordinated cross-functional teams and speakers to deliver impactful educational content, ensuring smooth logistical operations and high participant engagement.

COMPETITIONS & ACHIEVEMENTS

Best Staff of Period – Badan Mentoring 2025   **December 2024 – June 2025**
Lomba Inovasi Digital Mahasiswa – IPDP Division – Made it into national   **July 2024**
Computing Competitive Programming 2022 – Finalist   **June 2022**

SKILLS

Web Development: Flask, FastAPI, Nodejs, Laravel, RESTful API.
Databases: MySQL, PostgreSQL, Qdrant, ChromaDB, Redis.
DevOps & Tools: Docker, Git, Github, CI/CD, Github Actions.
Testing: Jest, unittest(Python).
Artificial Intelligence: Machine Learning, Deep Learning, LLM, NLP, RAG, TensorFlow, Scikit-learn, LangChain.
Data Analysis and Visualization: Pandas, Numpy, Seaborn, Matplotlib.
Soft Skills: Problem Solving, Leadership, Communication, Time Management.
Language: Indonesia (Native), English (EPRT Telkom University 560/677 equivalent to B2 CEFR)
Others: Microsoft Excel, Microsoft Word, Google Looker Studio.