

DANANG WAHYU PRASEKTIYO

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I'm a Computer Engineering student at Diponegoro University with a strong passion for emerging technologies, especially Artificial Intelligence, Machine Learning, and Big Data. I enjoy building innovative solutions and designing engaging user experiences through technology. Constantly learning and improving my technical and soft skills, I aim to contribute meaningfully to impactful tech projects. Open to collaboration, internships, or opportunities that align with my interests and help me grow professionally.

WORK EXPERIENCE

Laboratory Assistant — Diponegoro University

Aug 2024 – Dec 2025

- Entrusted as a Teaching Assistant for 5 practicum periods across 3 semesters, instructing a massive cohort of over 150 students per session.
- Demonstrated technical reliability by being re-appointed to lead Basic Electronics and Digital Systems labs twice, mentoring students in logic circuits and hardware troubleshooting.
- Facilitated Multimedia sessions focused on Video Editing software and creative workflows, guiding students in producing high-quality digital content.
- Managed administrative responsibilities for concurrent classes, including grading and providing personalized feedback, while maintaining high academic performance.

Frontend Developer Intern — Diskominfo Kota Semarang

Jul 2024 – Aug 2024

- Engineered responsive user interfaces using React.js and Tailwind CSS, ensuring high performance across devices.
- Integrated RESTful APIs to connect frontend modules with backend services, optimizing data retrieval and state management.
- Collaborated with backend engineers and UI/UX designers to translate Figma prototypes into scalable, reusable code components.

PROJECTS

SmarTik – AI Platform for Batik Semarangan | Link: www.smartik.id

- Generative AI Implementation: Spearheaded the development of the Generative Module using CycleGAN, enabling users to transform rough sketches into authentic Batik Semarangan patterns instantly.
- Backend & Pipelines: Engineered the core backend services using FastAPI, creating robust preprocessing pipelines (image resizing, normalization) to prepare user inputs for model inference.
- Cloud Deployment: Led the deployment of the entire backend infrastructure on Google Cloud Platform (Cloud Run), ensuring the classification and generative services are accessible publicly with serverless scalability.

Chat with PDF - RAG Powered PDF Assistant

- RAG Architecture: Engineered a Retrieval-Augmented Generation (RAG) system using LangChain and Google Gemini Flash, enabling users to interactively query and summarize complex PDF documents with high accuracy.
- Vector Search & Optimization: Implemented FAISS for high-speed similarity search and utilized HuggingFace (all-MiniLM-L6-v2) for local embeddings, optimizing latency and eliminating embedding API costs.
- Context Aware UI: Developed a conversational interface using Streamlit with session state management to maintain chat history context across user interactions, ensuring a seamless Q&A experience.

TRAINING & CERTIFICATIONS

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| Associate Data Scientist Badan Nasional Sertifikasi Profesi (BNSP) | Des 2025 – Dec 2028 |
| <ul style="list-style-type: none">Officially certified by the Indonesian National Professional Certification Authority (BNSP) as an Associate Data Scientist, validating professional competency in data analytics and modeling.Demonstrated proficiency in the end-to-end data science lifecycle, including data ingestion, preprocessing, exploratory data analysis (EDA), and model evaluation.Proven ability to apply statistical methods and machine learning algorithms to solve industry-standard problems according to national competency standards. | |

Data Science Bootcamp - Digital Skola

- Completed an immersive 3-month curriculum focusing on Python programming, SQL database management, Data Analysis, and Machine Learning algorithms.
- Performed comprehensive Exploratory Data Analysis (EDA) and advanced data visualization using Pandas, Matplotlib, and Seaborn to derive actionable business insights from complex datasets.
- Developed and optimized predictive models using Scikit-Learn, applying various techniques such as Linear Regression, Classification, and K-Means Clustering to real-world case studies.

EDUCATION

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| Diponegoro University Computer Engineering | Aug 2022 - Present |
| <ul style="list-style-type: none">Honors & Awards:<ol style="list-style-type: none">Passed Internal Selection for Gemastik 2025 (National ICT Competition).Passed Internal Selection for PKM 2022 (Student Creativity Program).Relevant Coursework: Artificial Intelligence, Machine Learning, Digital Systems, Multimedia, System Analysis & Design. | |

ORGANIZATIONAL EXPERIENCE

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| Member, Multimedia Division — Computer Engineering Research Club | Oct 2024 – Dec 2025 |
| <ul style="list-style-type: none">Conducting mentoring sessions and workshops on Figma features and optimal design workflows.Providing technical guidance and creative solutions in game development using Unity, helping the team overcome technical challenges. | |
| Vice Chairperson, Information and Communication Unit — HIMASKOM | Sep 2024 – May 2025 |
| <ul style="list-style-type: none">Spearheading strategic planning and unit management, acting as a key decision-maker to ensure seamless communication between internal and external stakeholders.Previously achieved a 90% success rate in program execution during tenure as Junior Staff. | |

TECHNICAL SKILLS

- Languages: Python, SQL, JavaScript, TypeScript.
- AI & Machine Learning: PyTorch, TensorFlow, Scikit-Learn, LangChain, FAISS (Vector DB), Google Gemini API, CycleGAN (Generative AI), LightGBM.
- Web Development: FastAPI (Backend), Streamlit, React.js, Next.js, Tailwind CSS, RESTful APIs.
- Cloud & DevOps: Google Cloud Platform (Cloud Run), Docker, Git/GitHub.
- Tools: Postman, Figma, Visual Studio Code.