Kurnia Zulda Matondang

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Jakarta, Indonesia

ARTIFICIAL INTELLIGENCE DEVELOPER

I have a strong foundation in AI, machine learning, and data science, with hands-on experience in Python programming, machine learning models, NLP, and computer vision. My passion lies in using AI to solve complex problems and drive innovation. Currently, I am focusing on advancing my expertise in NLP and computer vision, staying updated with the latest trends to remain at the forefront of AI. I thrive in collaborative environments and aim to work on cutting-edge technologies that push the boundaries of AI and data-driven solutions.

KEY COMPETENCIES

- Python Programming
- Machine Learning & Deep Learning
- Data Science & Analytics
- Continuous Learning & Industry Trend Awareness
- Natural Language Processing (NLP)
- Computer Vision
- Artificial Intelligence (AI) Development
- Problem Solving & Innovation
- Retrieval-augmented generation (RAG)
- Data Visualization & Insights
- Problem Solving & Innovation
- Collaborative Teamwork
- Project Contribution
- Vector Database

PROFESSIONAL EXPERIENCE

PT Icon Plus   **March 2025 - Present**
Artificial Intelligence Analyst

- Assisted in the development of a scalable AI-powered customer service chatbot by evaluating architectural options using LangChain and LangGraph, enabling modular and maintainable workflows.
- Researched and supported the deployment of on-premise large language models (LLMs) using existing application frameworks, ensuring compatibility with infrastructure and data governance policies.
- Benchmarked emerging AI technologies and methodologies to determine the most suitable tools, libraries, and approaches for business needs and technical feasibility.
- Conducted extensive evaluation of Retrieval-Augmented Generation (RAG) pipelines using various tech stacks and vector database configurations, optimizing accuracy, latency, and cost-performance trade-offs.
- Investigated scalable approaches to manage millions of vectors across multi-tenant environments, focusing on retrieval performance and isolation strategies.
- Defined and aligned technical needs with business objectives, helping decision-makers prioritize AI use cases that drive measurable impact.
- Contributed to the blueprint design of a multi-agent AI framework, identifying agent roles, orchestration logic, communication patterns, and system integrations.
- Participated in cross-vendor collaboration sessions to assess AI compatibility with PLN Group's operational and IT ecosystems.
- Worked closely with cross-functional teams (e.g., engineering, business, operations) to troubleshoot existing problems and deliver tailored AI solutions.
- Analyzed deployed applications to identify missing capabilities such as function calling and tool integration, enhancing functionality in production LLM systems.

PT PLN (Persero)   **November 2024 - February 2025**
Artificial Intelligence Consultant

• Collaborated closely with senior consultants to align PLN's business needs with cutting-edge AI solutions, serving as the primary technical lead in the AI domain.
• Provided technical insights and critical assessments of ongoing AI projects, helping stakeholders understand performance, limitations, and potential improvements.
• Conducted in-depth research on the latest AI developments and trends (e.g., LLMs, edge AI, computer vision), evaluating their relevance and applicability to PLN's operations.
• Identified suitable AI technologies and tools tailored to PLN's unique challenges, ensuring both scalability and cost-efficiency.
• Facilitated internal discussions and workshops to bridge technical concepts with business goals, improving cross-functional understanding of AI potential.
• Developed best practices for AI solution design by deeply understanding user problems and translating them into model design, architecture choices, and deployment strategies.

PT Indismart Kreatif Solusi   **April 2024 - October 2024**
Computer Vision Engineer

• Designed, trained, and evaluated an OCR model to automatically detect and extract container numbers from images, enhancing automation in logistics data entry.
• Improved an existing image classification system for assessing house vulnerability by enhancing both the model's accuracy and backend infrastructure. The classifier categorized structures into Confined Masonry, RC Infilled Masonry, Timber Structure, and Unconfined Masonry.
• Refactored and optimized backend services using FastAPI, improving system responsiveness and integration with machine learning models.
• Built and deployed machine learning pipelines using Python ecosystems, including TensorFlow, PyTorch, and OpenCV, for a variety of computer vision tasks.
• Deployed the application on NVIDIA Jetson devices, optimizing for edge inference performance in resource-constrained environments.
• Created and labeled custom datasets, trained classification models, and evaluated model performance through metrics and visualization tools.
• Delivered actionable insights to stakeholders using BI tools and contributed to data-driven decision-making in field projects.

Optimasi.ai   **Jun 2023 - Sep 2023**
Machine Learning Engineer

• Developed advanced models for sentiment analysis specifically tailored to the nuances of the Indonesian language, improving the accuracy and relevance of insights across a variety of industries.
• Led data-driven topic clustering and applied advanced summarization techniques to distill insights from large datasets, optimizing content analysis and decision-making processes.
• Engineered efficient neural networks to categorize and classify news articles, streamlining media analysis and enabling real-time content classification.
• Leveraged cutting-edge machine learning techniques to accurately predict CAPTCHA images and automate complex visual recognition tasks.
• Designed comprehensive multi-label classification systems for threat detection, enhancing security protocols with precise, simultaneous identification of multiple risks.
• Implemented innovative object detection solutions, enabling high-performance, real-time image processing for diverse use cases.
• Developed scalable RESTful APIs to ensure seamless integration between machine learning models and user-facing applications, improving accessibility and user experience.

EDUCATION & CERTIFICATIONS

Bootcamp Artificial Intelligent Skill Academy Pro Ruang Guru
Graduated from the AI Bootcamp with an Excellence award.

Universitas Islam Negri Maulana Malik Ibrahim Malang
Bachelor's degree in Informatics Engineering with a GPA of 3.75.

SKILLS

- TensorFlow
- Pytorch
- Transformers
- Keras
- Hugging Face

- Langchain
- Langgraph
- FastAPI
- Flask
- Scikit-learn

- MySQL
- PostgreSQL
- MongoDB
- Python
- Milvus

LANGUAGES

Indonesia
Native

English
TOEFL TEP/Prediction : 527