BILAL LAHFARI

Software Engineering, Big Data and AI

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PROFESSIONAL OBJECTIVE

Software engineering student specializing in big data and artificial intelligence with proven ability to deliver scalable, production-ready systems. Seeking opportunities to contribute to cutting-edge technology projects.

EDUCATION

ENSAM Rabat – National School of Arts and Crafts   Rabat, Morocco
Engineering Degree in Artificial Intelligence and Big Data   *2023 – 2026*
Relevant Coursework: Machine Learning, Deep Learning, Full-Stack Development, Data Engineering

TECHNICAL SKILLS

Languages: Python, Java, C++, TypeScript

AI/ML: PyTorch, Scikit-learn, Transformers, Fine-tuning, Pandas, NumPy

Backend: Spring Boot, FastAPI, Flask

Frontend: React, Angular, JavaScript

Data & Analytics: Hadoop, Spark, MySQL, MongoDB, Neo4j

DevOps Tools: Docker, Git

PROFESSIONAL EXPERIENCE

AI Engineer Intern – SNRT   July - August 2025
National Company of Radiodiffusion and Television (SNRT), Rabat

- Architected end-to-end offline multilingual video transcription and summarization pipeline using OpenAI Whisper for speech recognition, Helsinki-NLP models for machine translation, and Facebook BART-CNN for abstractive summarization.
- Developed and deployed production-ready FastAPI backend and React frontend with modular architecture and dependency injection.
- Implemented audio preprocessing service using Librosa and automated subtitle embedding with FFmpeg.

Web Developer Intern – CDG   July - August 2024
Caisse de Dépôt et de Gestion, Rabat

- Designed and deployed scalable code evaluation platform supporting multi-language execution via JDoodle API, streamlining technical recruitment for developer positions.
- Built robust Spring Boot backend with MySQL database and responsive Angular frontend, implementing comprehensive CRUD operations.
- Applied enterprise-grade modular layered architecture following industry best practices, ensuring maintainable and scalable codebase.

ACADEMIC PROJECTS

AI-Powered Phishing Detection Platform Python, LLM, FastAPI, React, Prompt Engineering

– Fine-tuned DistilBERT model achieving 95.67% accuracy on 11,430 URL dataset, outperforming classical ML approaches such as SVM and random forests by 12%.
– Conducted comprehensive prompt engineering and LLM performance analysis (Claude: 95%, ChatGPT/Gemini: 85%, DeepSeek: 75%).

Medical Assistance Chatbot Python, FastAPI, React, LoRA Fine-tuning

– Fine-tuned DeepSeek R1 8B model using LoRA technique on curated medical datasets, achieving 92% accuracy on medical query responses.
– Developed comprehensive PDF processing pipeline for medical documents.

LEADERSHIP

Team Leader & Trainer – Fatal Error ENSAM Rabat 2024 – 2025

– Led Python workshops for 300+ members and developed curriculum materials.
– Contributed to weekly newsletters and organized workshops, fostering a collaborative learning environment.

LANGUAGES

Arabic (Native), French (Fluent), English (Fluent)