Neder Hassan

Applied AI & Backend Engineer
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Summary

Software Engineering graduate specializing in applied AI, multilingual speech processing, LLM integration, workflow automation, and backend systems. Built and deployed an on-premise conversational intelligence platform for Tunisian sales meetings using Whisper Large v3, Gemini, NLLB-200, React, Express, MongoDB, Redis, and FastAPI. Open to remote, hybrid, onsite, full-time, part-time, contract, and alternance opportunities.

Experience

AI Developer / Software Engineer December 2025 – July 2026
Netcom SA *Tunis, Tunisia*

- Designed and developed **SalesAI**, an on-premise conversational intelligence platform that turns multilingual sales meetings into transcripts, structured business insights, client records, and follow-up drafts.
- Built a React/TypeScript local-first frontend and an Express.js backend with MongoDB, JWT/RBAC, BullMQ, Redis, audit logging, chunked uploads, diagnostics, and inline queue fallback.
- Integrated FastAPI services using Whisper Large v3, faster-whisper, NLLB-200, and Gemini for transcription, segmented translation, sales analysis, and controlled email generation.
- Fine-tuned Whisper Large v3 on 18.2 hours of Tunisian Arabic and code-switched speech (5,451 training samples), evaluated 3 checkpoints with WER/CER, and retained the 5,200-step model.

AI & Workflow Automation Intern June 2025 – August 2025
Netcom SA *Tunis, Tunisia*

- Designed and deployed n8n workflows in Docker to automate approvals, notifications, and data synchronization between design, production, and finance teams.
- Added input validation, structured logging, monitoring, access-control checks, error handling, and recovery documentation to improve traceability and maintainability.

Projects

BidEk | *Java, Spring Boot, MongoDB, Thymeleaf, Bootstrap, JWT, Maven* 2025

- Built an online auction marketplace with secure authentication, user profiles, auction creation, bidding, notifications, and responsive interfaces.

UNSW-NB15 Network Intrusion Detection System | *Python, scikit-learn, PyTorch* 2025

- Developed an end-to-end multiclass intrusion-detection pipeline with preprocessing, feature engineering, model comparison, confusion matrices, and false-positive/negative analysis.

Open Threat Intelligence Hub | *Python, FastAPI* 2025

- Created a backend that aggregates and normalizes threat indicators, calculates risk scores, and exposes filtering, lookup, and enrichment APIs.

Education

Faculty of Sciences of Monastir Monastir, Tunisia
Bachelor's Degree in Software Engineering and Information Systems *2023 – 2026*

Technical Skills

Languages: Python, Java, JavaScript, TypeScript, Bash, SQL, C (basic)
AI / Data: Whisper, faster-whisper, PyTorch, Transformers, scikit-learn, Pandas, NumPy, Matplotlib, NLLB-200, LLM integration, WER/CER evaluation
Web / Backend: React, Next.js, Node.js, Express.js, Spring Boot, FastAPI, MongoDB, PostgreSQL, SQLite, REST APIs, JWT, RBAC
Tools / Infrastructure: Git, Docker, n8n, Redis, BullMQ, Linux, WSL, Maven, Vite, Tailwind CSS, IndexedDB/Dexie, CUDA

Certifications & Languages

Certifications: Aviatrix Multicloud Network Associate; AWS EC2/S3; Linux; Cisco Cybersecurity Essentials; Certified Cybersecurity Educator Professional
Languages: Arabic (Native), English (C2), French (C1), German (B1)