

MOHAMMAD ALI NABIL

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Professional Summary

AI Engineer specializing in LLM-powered automation, RAG systems, and intelligent data workflows. Experienced in building autonomous AI agents, structured data pipelines, and scalable Python backends, with hands-on work across AI-assisted extraction, validation, and real-time voice systems.

Education

North South University • Dhaka, Bangladesh

Bachelor of Science in Computer Science & Engineering (CSE) (2024 – Present)

Experience

The Data Island • Dhaka, Bangladesh

AI Engineer Intern (November 2025 – January 2026)

- Built AI-powered automation workflows integrating LLM APIs for structured data extraction.
- Developed Python-based scraping and validation pipelines for structured datasets.
- Implemented data cleaning and normalization processes to improve dataset accuracy.
- Improved workflow efficiency through batching and structured execution design.
- Supported debugging and optimization of AI agent reasoning systems.

Selected Projects

FITMAN — Full-Stack AI Fitness & Nutrition Coaching Platform

- Built a full-stack AI fitness and nutrition platform using React, TypeScript, FastAPI, Supabase, LangGraph, and LangChain.
- Developed personalized workout generation, split-based routines, nutrition tracking, weight/progress monitoring, and an AI coaching chat experience.
- Implemented persistent AI memory, profile-aware coaching context, authentication, protected routes, document management, and Supabase PostgreSQL/Storage integration.
- Designed a secure backend API with Pydantic validation, Row Level Security, rate limiting, token-based authentication, and structured API responses.

Tech: React, TypeScript, Vite, Tailwind CSS, FastAPI, Python, Supabase, PostgreSQL, LangGraph, LangChain, Groq

- End-to-End AI Agent System** — Built an autonomous AI agent with memory, multi-step reasoning, RAG pipelines, and tool execution using FastAPI and Streamlit.
- LiveKit MCP AI Assistant** — Developed a multi-client AI assistant integrating LLM APIs, vector databases, real-time search, and modular ingestion pipelines.
- RAG Documentation Agent** — Created a retrieval-augmented chatbot using embedding-based similarity search and deployed it as a live web application.
- Bangla AI Voice Agent** — Built a real-time speech assistant integrating speech-to-text, LLM reasoning, text-to-speech, and conversational memory.
- AI Vision Agent** — Developed a vision-enabled automation system using OpenCV and transformer-based models for object recognition and OCR.

Skills & Interests

Programming: Python, C, C++, JAVA

AI/ML: LLMs, RAG, AI Agents, MCP, Transformers, NLP, STT/TTS, Computer Vision

Web & Data: BeautifulSoup, Selenium, REST APIs, JSON, CSV, Data Cleaning & Validation

Frameworks/Tools: LangChain, LangGraph, FastAPI, Streamlit, PyTorch, Hugging Face, Pinecone, Git

Core Strengths: Automation Pipelines, Vector Databases, Prompt Engineering, Debugging, Structured Data Processing

Language: English — Upper-Intermediate (B2), Professional Working Proficiency