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Personal Profile

Artificial Intelligence Engineer with **1+ year of hands-on industry experience** in developing and deploying AI-driven solutions. Skilled at collaborating with backend, frontend, and mobile app teams to deliver large-scale Machine Learning and Deep Learning projects for international clients. Experienced in building and deploying Computer Vision, NLP, and automation solutions, managing the full lifecycle from research to production. Proficient in deploying AI models and APIs on VPS and cloud servers using Docker, FastAPI, and CI/CD pipelines. Strong communication and teamwork skills with a proven ability to translate complex AI concepts into real-world business impact.

Education

North South University, B.Sc. in Computer Science & Engineering 2026

Cantonment Public School and College, Lalmonirhat, HSC, SSC (Science) 2020, 2018

Experience

AI Engineer
Softvence, Betopia Group, Dhaka, Bangladesh

Jul 2025 – Present
Full-time, On-site

- Design, develop, and deploy scalable AI solutions for real-world business applications, leveraging machine learning, deep learning, computer vision, and large language models.
- Build intelligent AI agents, RAG systems, and workflow automation solutions to enhance operational efficiency and decision-making processes.
- Develop and optimize conversational AI applications, including chatbot systems, knowledge assistants, and autonomous agent workflows.
- Fine-tune, evaluate, and deploy open-source and proprietary AI models for domain-specific use cases and production environments.
- Develop production-ready APIs and backend services, ensuring reliability, scalability, and maintainability of AI-powered applications.
- Implement cloud deployment, containerization, monitoring, and MLOps best practices to support efficient model lifecycle management.
- Collaborate with product managers, designers, and engineering teams to deliver high-quality AI solutions for international clients.

Projects

Autonomous Local Web Research & Wikipedia-Style Synthesizer (Multi-Agent AI)

GitHub

- Built a production-grade **Multi-Agent AI** research system using **LangGraph** for autonomous web research and knowledge synthesis.
- Designed planner, browser, fact-checking, and writer agents with graph-based orchestration and shared state management.
- Implemented parallel web extraction using **Playwright**, **BeautifulSoup**, and asynchronous workflows.
- Developed verification pipelines for cross-source fact validation and contradiction detection.

- **Tools:** Python, LangGraph, LangChain, Playwright, BeautifulSoup, FastAPI, Docker

Fine-Tuning Qwen3-14B for Reasoning & Conversational AI

GitHub

- Fine-tuned **Qwen3-14B** using **QLoRA** and **Unsloth** for reasoning and conversational tasks.
- Implemented memory-efficient training with **4-bit quantization**, gradient checkpointing, and LoRA adapters.
- Built end-to-end supervised fine-tuning pipelines using **Transformers**, **TRL**, and **PEFT**.
- Exported optimized models for deployment through **GGUF**, **llama.cpp**, and **Ollama**.
- **Tools:** Python, Qwen3-14B, Unsloth, Transformers, TRL, PEFT, LoRA, Ollama

PhyChat — Local AI Chatbot (RAG)

GitHub

- Built a PDF-based conversational AI system using **LLaMA 3.2**, **LangChain**, and **RAG**.
- Implemented document retrieval using **Ollama Embeddings** and **ChromaDB**.
- Developed streaming responses and interactive chat interfaces with **Streamlit**.
- **Tools:** Python, LangChain, LLaMA 3.2, ChromaDB, Ollama, Streamlit

Brain Tumor Segmentation using MRI (Knowledge Distillation)

GitHub

- Developed MRI tumor segmentation models using **U-Net**, **EfficientNetB7**, and **ResUNet**.
- Applied preprocessing, augmentation, and knowledge distillation techniques on the BraTS dataset.
- Evaluated model performance using Dice Score and IoU metrics.
- **Tools:** Python, TensorFlow, Keras, OpenCV, NumPy, Matplotlib

Technologies

AI/ML: Python, TensorFlow, PyTorch, scikit-learn, Keras, NumPy, Pandas, OpenCV, LangChain, Ollama, ChromaDB, FAISS, Pinecone, MLflow

Web & API: FastAPI, Flask, Django, REST APIs, Docker, Nginx, Apache, Swagger, Postman

Cloud & DevOps: AWS (EC2), Azure, Google Cloud, Render, Firebase, GitHub Actions, Bitbucket, CI/CD pipelines, VPS deployment

Databases: MySQL, MongoDB, PostgreSQL

Programming: Python, C, C++, Java, JavaScript, TypeScript, Bash, Julia

Frontend: React, TailwindCSS, Bootstrap, Streamlit

Automation: n8n, Make.com, Zapier

Tools: Git, GitHub, Jira, Notion, Figma, Canva, Raspberry Pi, PowerShell

Key Skills

- End-to-end AI development: from research and prototyping to deployment on production servers.
- Strong background in Computer Vision, NLP, LLM fine-tuning, and automation pipelines.
- Cross-functional collaboration with backend, frontend, and mobile app teams.
- Experienced in cloud-based deployment, Docker containerization, and scalable APIs.
- Effective communication with international clients, translating business needs into AI solutions.
- Leadership and teamwork in delivering multi-disciplinary projects under tight deadlines.