

Rubayet Hassan Rupom

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SUMMARY

Full-stack engineer and CS graduate who builds and ships. Independently took 5 products from idea to production, spanning AI applications, analytics dashboards, and Chrome extensions. Combines robust engineering (Next.js, FastAPI, LLMs) with a product mindset—focusing on sub-second latency targets, data-driven iteration, and instrumented funnels. Ready to bring builder energy to a fast-paced team where product ownership and speed matter.

SKILLS

Languages: Python, TypeScript, JavaScript, SQL, C
AI / ML: PyTorch, TensorFlow, scikit-learn, Transformers, SHAP
LLM / NLP: LLaMA 3.x, Groq API, Prompt Engineering, RAG Pipelines
Backend: FastAPI, Flask, REST APIs, Node.js, Docker
Frontend: Next.js, React, Tailwind CSS, Recharts
Data & Databases: PostgreSQL, MySQL, Supabase, MongoDB, Redis
Analytics & Tools: GA4, Microsoft Clarity, Git, Vercel, CI/CD, Linux

PROJECTS

ChannelSpy — YouTube Competitor Intelligence Live Demo | GitHub
Next.js 15, TypeScript, YouTube Data API v3, Recharts, GA4

- Engineered a full-stack SaaS analytics dashboard using Next.js and TypeScript, processing YouTube URLs into actionable performance reports and CSV exports in under **15 seconds**.
- Architected a secure backend integrating the YouTube Data API v3 and engineered median-based scoring with IQR outlier detection, measured by an **11-event GA4 analytics funnel** to track user engagement.

Ummah Speaks — AI Islamic Companion Live Demo | GitHub
Next.js 15, TypeScript, Groq API (Llama 3), Tailwind CSS 4

- Developed a serverless AI web application leveraging the Groq API to detect emotional intent and deliver personalized reflections, achieving **sub-2s response latency**.
- Built scalable and resilient API routes implementing in-memory rate limiting and privacy-centric local storage to support robust production traffic without external database bottlenecks.

SkipTheTerms — AI Terms of Service Summarizer GitHub
FastAPI, Python, JavaScript (Manifest V3), Supabase, Groq API

- Built a cross-platform Chrome Extension and Python REST API utilizing Llama 3.3 70B to summarize complex legal documents in **under 3 seconds**.
- Optimized system performance by implementing Supabase caching, which slashed latency to **50ms** for repeated queries and reduced LLM operational costs by **40%**.

C-MAT — Multimodal Neurodegenerative Disease Classifier Undergraduate Thesis
PyTorch, ConvNeXt, Transformers, MNE-Python, Optuna, GradCAM

- Architected a unified multimodal deep learning framework fusing structural MRI and resting-state EEG to perform four-class differential diagnosis across a massive **1,102-subject** multi-site cohort.
- Engineered a missing-modality-robust gated fusion mechanism with a ConvNeXt-Tiny encoder, achieving a **0.611 macro F1 score** and outperforming classical multi-class baselines by **+0.302**.

EXPERIENCE

Teaching Assistant | Vertical Horizon 2024

- Facilitated comprehension of complex technical concepts (Python programming & Biology) by designing hands-on coding exercises and lab sessions for **100+ students**.

Project Lead & Distribution Manager | Youth Society of Bangladesh Dec 2023 – Present

- Led logistical operations across distributed locations, streamlining resource allocation workflows to increase distribution efficiency by **30%** for over 500 beneficiaries.

EDUCATION

BRAC University Dhaka, Bangladesh
B.Sc. in Computer Science Graduated 2025
Coursework: Machine Learning, Neural Networks, AI, Data Structures & Algorithms

ACHIEVEMENTS & ACTIVITIES

Competitions: AgentX AI Prompting Competition (Microsoft, 2025) | BRAC Intra-Programming Contest
Roles: Technical Facilitator, BRAC University Computer Club — Workshops for 100+ participants
Languages: English (Fluent), Bangla (Native), Hindi & Urdu (Conversational)