Horipriya Das Arpita

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Horipriya_68   Horipriya_68   🔗 Portfolio

Skills

Languages: C, C++, Java, JavaScript, Python, SQL
Concepts: OOP, Design Patterns, SOLID Principles
Technologies: React.js, Next.js, Node.js, Express.js, MySQL, Prisma, LangChain.js, Flowise, Hugging Face, OpenCV, Git, GitHub, Postman, Android Studio, Firebase, Shopify Polaris

Professional Experience

AI R&D Engineer, Intern
Sigmoix AI
09/2025 – Present

- Developed large-scale web scraping pipelines to extract and structure product data (8K+ items) from e-commerce sites using **Crawl4AI, Firecrawl,** and **Selenium**.
- Implemented multi-threaded scraping with dynamic user-agent rotation, reducing data extraction time from 1 hour to ~30 minutes.
- Designed and optimized retrieval pipelines integrating **BM25**, **FAISS**, and **Hybrid + Reranking** strategies; achieved significant improvements in precision and response relevance.
- Fine-tuned **Gemma 270M** SLM using **LoRA** on 25K+ training examples for product search and query understanding.
- Built and evaluated **embedding fine-tuning datasets** (100K+ query–document pairs) with augmentation and hard negatives for retrieval optimization.
- Explored advanced **RAG**, **Agentic RAG**, and **RAPTOR** frameworks to enhance semantic retrieval and LLM-driven search performance.

Software Engineer, Intern
Luminous Lab
12/2024 – 05/2025 | Dhaka, Bangladesh

- Built **Shopify apps** using **Remix**, **Polaris**, and **Prisma**, enabling user registration, referral systems, and seamless REST API integrations.
- Enhanced **VoiceERP**, developing **Flowise-based AI voice workflows**, Bangla conversational prompts, and optimizing **c**alling-based AI interactions for natural dialogue.
- Migrated Flowise functionalities to **LangChain.js**, implementing custom LLM chains, RAG with ChromaDB and PDF **knowledge-based Q&A** APIs for contextual AI chat.
- Contributed to **Beige** and **Carlo** platforms by integrating frontend dashboards with backend APIs, ensuring smooth data flow and consistent UI behavior.

Certificates

- ICPC Orbitax SUST SWE Technovent 🔗
- National Girls' Programming Contest 2022 🔗
- Ada lovelace Programming Competition 2022 🔗
- BdApps National Hackathon 2022 🔗

Organisations

Executive Member
02/2024 – 06/2025 | Sylhet, Bangladesh

Projects

Face Recognition System 🔗
AI-Based Facial Identity Matching
07/2025 – Present

- Built a full-stack web app with user registration and real-time identity verification using facial features.
- Implemented backend for known face storage, **face embeddings,** and recognition with automated CSV attendance logging.
- Designed responsive frontend for image uploads, **live webcam detection,** and instant feedback.
- Enabled **duplicate prevention** and timestamped daily attendance tracking for efficiency.
- **Technology :** • Python • OpenCV • Next.js • Express.js • MySQL

AI Storybook Generator 🔗
Chapter-wise Story & Image Creator
02/2025 – Present

- Developed an AI platform to generate illustrated children's books using **Google Gemini** and **Hugging Face models**.
- Implemented secure API key management with **AES-256 encryption** and a quota system for concurrent users.
- Built multi-model fallback for image generation ensuring high uptime and fast responses.
- Designed optimized **MySQL** schema and APIs; created a responsive flipbook UI with moderation features.
- **Technology :** Next.js 15 • React 19 • Prisma • MySQL • Clerk Auth

Dreamify Images 🔗
AI Image Generator
07/2025 – 09/2025

- Developed a full-stack AI image generation app with secure **NextAuth.js** authentication and **AES-256 key** encryption.
- Integrated **Hugging Face FLUX.1 model** and **Cloudinary** for scalable image creation and storage.
- Implemented rate-limiting, dual-mode fallback, and a responsive Tailwind dashboard for user interaction.
- **Technology:** Next.js 15 • Prisma • PostgreSQL • Cloudinary • Hugging Face • TailwindCSS

Open Source Projects

Shahad's Agent – AI Browser Extension
Open Source Collaboration (mentored by a Senior Software Engineer)
09/2025 – Present | Remote

- Developed and stabilized an AI chat feature that lets users highlight any text on a webpage and chat with the AI about that selected content.
- Built a Gmail summarization feature that generates instant, secure summaries of email threads using AI.
- Improved performance, fixed session and API key issues, and ensured smooth, secure operation across Chrome and Firefox.

Education

B.Sc. In Software Engineering
Shahjalal University of Science and Technology
02/2020 – 07/2025 | Sylhet, Bangladesh
  CGPA: 3.79