Md. Ramjan Miah

Systems Software Engineer | Full-Stack Developer

B220305006@cse.jnu.ac.bd · +8801865043081 · linkedin.com/in/ahmedtrooper · github.com/AhmedTrooper

Dhaka, Bangladesh · **Availability:** 8:00 PM – 5:00 AM BDT (Matches US EST Business Hours)

ENGINEERING HIGHLIGHT: PROCESS SUPERVISOR ARCHITECTURE

OSGUI / OSD-Downloader – *Rust, Tauri v2, React, Zustand, SQLite*　　　　　Repo | View Code Implementation

- **The Challenge:** Standard OS-level process management failed to terminate 'yt-dlp' child workers (zombie processes) during Pause/Resume actions, causing memory leaks.
- **The Solution:** Architected a **Stream-Interception Supervisor** that injects control logic directly into the active 'stdout' data stream. Instead of hunting PIDs, the system pushes a "Pause Intent" to a synchronized Zustand store.
- **The Result:** Achieved 100% reliable pausing by forcing processes to self-terminate from within their own closure. Refactored global state to a **Normalized Data Structure**, eliminating UI re-renders during high-frequency I/O.
- **Global Impact:** Achieved **global open-source adoption**, receiving active feature requests from international users (e.g., China) for this optimized architecture.

TECHNICAL SKILLS

- **Core Concepts:** System Design, Data Structures & Algorithms, Memory Management
- **Languages:** Rust, TypeScript, Python, Go, SQL, Dart
- **Frontend:** Next.js, React, **Tauri v2**, Flutter, Zustand, Tailwind CSS, TanStack Query
- **Backend & Cloud:** NestJS, FastAPI, Node.js, PostgreSQL, Redis, Docker, AWS, GitHub Actions
- **AI & ML:** PyTorch, Scikit-learn, Deep Learning, LangChain, Keras, TFLite, OpenCV, Pandas

PROFESSIONAL EXPERIENCE

Shaitrish (EdTech Startup)　　　　　　　　　　　　　　　　　　　　　　**Sep 2025 – Present**
Full Stack Engineer – Part-time　　　　　　　　　　　　　　　　　　　　　　　Live Product

- **Strategic Engineering:** Collaborating directly with the Founder/CEO to translate high-level business logic and **strategic product vision** into production-grade features for **Course37** (a SaaS LMS, scaled for 100000+ students).
- **Full-Stack Architecture:** Refactored core **Next.js** authentication flows (redirections) and standardized user feedback systems (toasts), significantly improving UX consistency.
- **Product Evolution:** Actively transforming raw business requirements into functional, scalable software features within a flexible, independent engagement.
- *Stack:* Next.js, React, Supabase, PostgreSQL, Redis, LangChain.

Independent R&D Engineer (Open Source)

- **MIDE**　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　Source Code
  Building an experimental **VSCode-like cross-platform IDE**, with a core architecture focused on mobile devices and high efficiency using **Tauri v2** & **Rust**.
- **DevOpsEasy**　　　　　　　　　　　　　　　　　　　　　　　　　　　　Source Code
  Architected a native Docker GUI that achieved **95% memory reduction** (61MB vs 1GB+) compared to Docker Desktop by leveraging Tauri V2.

KEY PROJECTS

RailwayMatrixBD – Route Optimization Engine　　　　　　　　　　　　　　　　　Source
Stack: Tauri v2 (Rust), React, TypeScript, Zustand, GitHub Actions

- Utilized by **400+ users** for complex route planning on the Bangladesh Railway network.
- Developed a matrix-based $N \times N$ routing algorithm to query all station combinations in a single operation.

APIPocket – API Development Tool　　　　　　　　　　　　　　　　　　　　　Source
Stack: Tauri v2, Rust, React, TypeScript, Zustand

- Building a mobile-first API testing client that runs seamlessly on both Desktop & Mobile, designed as a lightweight alternative to Postman.

ML-Detector – Edge AI Mobile App　　　　　　　　　　　　　　　　　　　　　Source
Stack: Flutter, Keras, TFLite

- Deployed offline CNN on mobile devices using TFLite, achieving ∼95% accuracy in disease detection.

EDUCATION & ACHIEVEMENTS

Jagannath University　　　　　　　　　　　　　　　　B.Sc. in Computer Science and Engineering

- **Winner**, Regional Math Olympiad; Contestant, National Math Olympiad.
- **Participations:** VisionX 2025 (AI Innovation), NASA Space Apps 2025, IUT Fest 2024.