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LinkedIn: linkedin.com/in/ahmedtrooper | GitHub: github.com/AhmedTrooper

Portfolio: personal-portfolio-ahmedtroopers-projects.vercel.app

Education

Jagannath University, Dhaka, Bangladesh

Bachelor of Science in Computer Science

Expected: 2027 | Current Semester: 4th (2.2)

Professional Experience

Full-Stack Web Engineer (Contributor)

Aug 2025 – Present

Shaitrish (Remote)

- Collaborating with CEO on **production-grade** CMS (Admin Backend/Frontend, Student Frontend) supporting **real-time collaboration**
- Optimized Zod-based authentication validation, improving accuracy and consistency** for scalable microservices architecture
- Tech Stack: Nest.js, Next.js, ShadCN, TypeScript, Redis, JWT, Google Auth, Prisma, PostgreSQL, Cloudflare

Projects

RailwayMatrixBD – Full-Stack Desktop Application

Source | Releases

Stack: *Tauri v2 (Rust), React.js, TypeScript, Zustand*

- Built cross-platform desktop app with **two advanced features unavailable** in official Bangladesh Railway app
- Matrices-based $n \times n$ route query: Automatically** queries all station combinations in one click, **saving $\sim n \times$ [time per query] seconds** compared to manual process
- Segmented ticket search for indirect routes** when direct tickets unavailable; **reduces API load via local processing**

OSGUI/OSD-Downloader – Full-Stack Desktop Application

Source | Releases

Stack: *Tauri v2, React.js, TypeScript, Zustand, SQLite, FFmpeg*

- Built **lightweight GUI for yt-dlp** with **concurrent downloads**, pause/resume, and **FFmpeg video processing** integration
- Optimized CPU and memory footprint by 40%; outperforms** Persepolis (**100k+ Linux users**) in features and UX

ML-Detector – Cross-Platform Mobile Application

Source | Releases

Stack: *Flutter, Keras, TensorFlow Lite, Image Picker*

- Built **offline** tea leaf disease detection app with on-device CNN **achieving $\sim 95\%$ accuracy**; camera/gallery input support

AI Fest Management – Full-Stack Web & AI Platform

Source Code

Stack: *Django REST, React.js, HeroUI, Zustand, LangChain, LangGraph*

- Building **centralized** fest platform with admin/user roles, **AI-powered queries**, and **role-based access workflows**

JnU-Bus-Routes – Mobile Application

Source | Releases

Stack: *Flutter, SQLite, Riverpod*

- Built **offline-first** campus bus tracking app covering **all university routes** with **enhanced UI/UX** and accessibility

Technical Skills

Languages: Python, TypeScript/JavaScript, Rust, Golang, Java, C++, Dart, Kotlin, C

Web & Mobile: React.js, Next.js, Node.js, Nest.js, Django, Express.js, Flutter, Vue.js, Tailwind CSS, ShadCN

AI/ML: LangChain, LangGraph, TensorFlow Lite, Keras, Pandas, NumPy, CNN Model Training

Databases: PostgreSQL, MongoDB, MySQL, Redis | ORM: Prisma, Mongoose

DevOps: Docker, Git, Cloudflare, FFmpeg | Architecture: Microservices, REST APIs, Real-time Systems

Desktop: Tauri (Rust), Electron Alternative | Platforms: Linux, Web, Android, macOS, Windows

Achievements & Participations

Winner, Regional Math Olympiad | Contestant, National Math Olympiad

Participant, IUT Fest 2024 | Participant, NASA SpaceX Challenge 2025