Abrar Mahir Esam

Full-Stack Software Engineer | Java, Python & TypeScript
M.Sc. CSE (Part-time), MIST
Mirpur DOHS, Dhaka, Bangladesh

abrarme118@gmail.com
+880 1341759355
github.com/Abrar118
abrarmahiresam.dev | linkedin.com/in/abrar118

Summary

Full-stack engineer and **principal architect of Psycloud**, a clinical platform serving **1,000+ users**. Builds production systems end to end: **Spring Boot**, **FastAPI** and **Node.js** backends, **React** / **Next.js** and **Flutter** clients, over **PostgreSQL**, **MongoDB** and **Redis**. MSc researcher in local LLM agents, **Codeforces Specialist** and IEEE-published.

Professional Experience

Full-Stack Software Engineer, Bengal Byte | Experience Letter *Aug 2025 – Aug 2026*
Tech Stack: *Next.js (TypeScript), FastAPI (Python), PostgreSQL, Redis, Docker*

- **Principal architect** and one of the first engineers on **Psycloud**, a clinical platform now serving **1,000+ users**; designed its core systems and the engineering conventions the team still builds on.
- Built the **practitioner dashboard** (patient records, case histories, treatment data) and the **assessment engine** that scores questionnaires and tracks patient progress between sessions.
- Designed the **backend services, data models and REST APIs** behind them, keeping patient health data confidential and compliant with EU data-protection rules.
- Shipped **test-driven**, with manual code review layered on multi-agent AI review (**Claude Code**, **Codex**) before every merge.

Full-Stack Web & Mobile Engineer (Part-time Contract) *May 2024 – May 2026*
Prime Minister's Office, Government of the People's Republic of Bangladesh
Tech Stack: *Java 21, Spring Boot, React (TypeScript), Flutter, PostgreSQL, Redis, Docker*

- Architected the **Spring Boot** (Java 21) backend for a government personnel and duty-management platform serving **300 concurrent users**, on **PostgreSQL** with **Flyway** migrations.
- Secured it with **JWT**, **OAuth**, role-based access control, **Redis**-backed session revocation, rate limiting, audit logging, MFA and passkeys.
- Added a **Redis** caching layer, tuned PostgreSQL **indexes and queries**, and served high-volume duty data through paginated **HATEOAS REST APIs**.
- Built the **React** + **TypeScript** web client and the cross-platform **Flutter** app on one shared API contract.
- Ran **CI/CD**, **Docker**-based cloud deployments and monitoring through to production.

Full-Stack Web Developer, Nyntax | Reference *Apr 2025 – Aug 2025*
Tech Stack: *React 18 (TypeScript), Express.js, MongoDB*

- Built **React** and **Express.js** features on **MongoDB** for the SoftCar rental platform — insurance, booking and admin modules.
- Migrated legacy JavaScript to type-safe **TypeScript** across a mixed-stack codebase.
- Built a browser extension that records user sessions as training data for **AI agents** (similar to Jam).

Projects

ASTRYN: Local-First Desktop Client for Linear Release | Code
React 19, TypeScript, Rust, Tauri 2, GraphQL, TanStack Query, SQLite

- Desktop client for Linear with a **Rust** core, an offline-first **SQLite** cache with background sync, and OS-keychain credential storage.

CrimeLens: Community-Verified Crime Reporting Live | Code
Next.js 15, TypeScript, MongoDB, Firebase, Gemini, Leaflet

- Geo-tagged incident reports with community verification, **Gemini** scene analysis and crime heatmaps; **WebXtreme 2025 finalist** (top 11).

Nudge: Local-First Task Manager Code
Flutter, Dart, sqflite, local notifications

- Flutter task manager with an escalation engine, DST-safe recurrence, persistent alarms and home-screen widgets.

QuickDev: Instant Dev-Environment Launcher npm | Code
Rust, async, TOML, fzf

- Async **Rust** CLI published to npm that opens a full dev environment in one command; peaked at **530 downloads/week**.

Local LLM Fallback Stack *Personal tooling*
llama.cpp, Ollama, quantized Qwen and Gemma models (9B–27B)

- Local LLM setup that takes over from cloud AI tools when token quotas run out; tuned model, **quantization** and runtime settings for quality, speed and memory on consumer hardware.

EduVerse: Online Learning Platform (Therap Javafest) **Live** | **Code**
Spring Boot, Hono, Next.js, MongoDB, Jitsi Meet

- Learning platform with **Spring Boot** and **Hono** services on MongoDB, live classes through Jitsi Meet and AI-assisted course generation.

Skills

Languages: Java, TypeScript, JavaScript, Python, Dart, Rust, C++
Backend: Spring Boot, Spring Security, Spring Data JPA, FastAPI, Node.js, Express.js, REST, GraphQL, WebSocket / STOMP
Frontend & Mobile: React, Next.js, Tailwind CSS, TanStack Query, Zustand, Flutter
Data & Security: PostgreSQL, MongoDB, Redis, SQLite, Flyway, JWT, OAuth2, RBAC
DevOps & Quality: Docker, CI/CD, Git, JUnit, Mockito, TDD, Agile / Scrum
AI & LLM: llama.cpp, Ollama, quantized local models, MCP servers, Claude Code, Codex
Foundations: Data Structures & Algorithms, System Design, OOP & Design Patterns, SOLID, DBMS

Education & Achievements

M.Sc. in Computer Science and Engineering (Part-time), MIST *2025 – Present*
Thesis (in progress): adaptive control of local LLM agents on consumer hardware
B.Sc. in Computer Science and Engineering, MIST — CGPA 3.56/4.00 *2021 – 2025*

Codeforces Specialist (max rating 1425, 496 problems solved, **Profile**) | **Champion**, Independence Day Programming Contest 2022, MIST | **Finalist**, WebXtreme Hackathon 2025 (top 11) & BUET DevSprint 2024

Publication

AI-Enhanced Application for Incentivizing Waste Recycling — IEEE QPAIN 2025 **Certificate**