MUNTAHI SAFWAN MAHFI

Full-Stack Software Engineer | Founder & CEO, Octarnal

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I build software that businesses depend on day to day. While studying CSE at AIUB (CGPA 3.94, five-time Dean's List), I co-founded Octarnal, and we now ship products for clients in the USA, Europe and Australia, from the e-commerce platform behind a brand's BDT 3M+ in revenue to a clinic directory in Australia. At TDS Softlink I sit on the R&D team, moving computer vision models off the laptop and onto edge hardware on textile lines and CCTV networks. Most of what I know about shipping well, I learned from the people I build with.

EXPERIENCE

Octarnal | *Founder & CEO, Dhaka* Mar 2026 – Present

- Lead delivery of full-stack web, mobile, e-commerce and AI systems for international clients, owning scoping, architecture and handover; built OAMS, our internal agency management system.
- Delivered **Myotherapy Directory**, a directory-listing SaaS with admin dashboard for an Australian clinic group, plus their newsletter, staff timesheet and website work.
- Architected platforms for a US client portfolio (mentorship, career assistant, wellness network, social), and led a payment gateway migration from Stripe to an NMI-based processor across six products.

TDS Softlink | *IT Executive, R&D* Dec 2025 – Present

- Develop hardware-enabled machine learning systems on the R&D team, including a **CCTV-based attendance system** and a **fabric defect detector** for production use.
- Prototype new edge systems running computer vision models on-site, from data collection and training to hardware integration.

Softeins Lab | *Software Developer* Sep 2024 – Oct 2025

- Built full-stack web applications, backend services and third-party API integrations; ran code reviews and mentored junior developers.

PROJECTS

Cloister | *Open-source cross-platform desktop app (Rust, Tauri)* muntahi-safwan.github.io/Cloister

- Lightweight cross-platform client that runs WhatsApp, Discord, mail and Facebook in one window with native notifications, privacy mode and a focus timer, at a fraction of the RAM of separate apps. Published with an installer and landing page.

Octahive | *Agentic agency management platform* app.octahive.app

- AI-agent platform built on Hermes that turns agency operations into a fully automated business suite for agency owners, covering clients, projects and day-to-day workflows. Deployed on Cloudflare.

Elorva BD | *E-commerce platform for a luxury fragrance brand* elorvabd.com

- Built and maintain the storefront, inventory system and workflow automations for Elorva Perfumes, supporting the brand past BDT 3M+ in revenue since launch.

RESEARCH

- Co-author, **OBHS-L**, a block Huffman scheme for deterministic-latency lossless audio compression (Springer Nature journal, under revision), with Dr. Md. Manzurul Hasan (AIUB) and Dr. Gahangir Hossain (UNT). Wrote Python reference and static-memory C implementations.
- Co-author, **Adaptive Graph Compression using Reinforcement Learning**, research on efficient GraphRAG retrieval.

EDUCATION

BSc in Computer Science and Engineering | *American International University-Bangladesh* 2023 – Present

CGPA 3.94 / 4.00 | Dean's List Award (5 times) | Academic merit scholarship recipient

Higher Secondary Certificate | *Adamjee Cantonment College, GPA 5.00 / 5.00* 2022

TECHNICAL SKILLS

Languages: TypeScript, JavaScript, Python, PHP, C++, C, Java, Rust, SQL
Frontend: React, Next.js, Astro, Tailwind CSS, responsive UI, Figma
Backend & Data: Node.js, NestJS, Express, REST APIs, PostgreSQL, MySQL, MongoDB, Drizzle ORM, payment gateway integration
AI & ML: Computer vision, edge ML deployment, RAG chatbots, LLM integration, agentic workflows
Platforms & Tools: Git, GitHub, Cloudflare, DigitalOcean, VPS deployment, Tauri

CERTIFICATIONS & ADDITIONAL

Certification: CS50x: Introduction to Computer Science, Harvard University
Awards: 1st Place, Intra School Science Fair 2019 (Biodegradable E-Waste Energy Production)
Languages: Bengali (native), English (fluent), Hindi (conversational)