Shaswata Das

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github.com/Shaswata28 | Chattogram, Bangladesh

Education

East Delta University, Chattogram Sep 2022 – Present
B.Sc. in Computer Science

- CGPA: **3.86/4.00**
- Recipient of the **Chairman's Distinguished Scholarship**
- Expected Graduation: 2026

Notre Dame College, Dhaka June 2021 – Feb 2022
Higher Secondary Certificate (HSC) – GPA: **5.00/5.00**

Saint Placid's School and College, Chattogram Jan 2018 – May 2019
Secondary School Certificate (SSC) – GPA: **5.00/5.00**

Research Experience

Federated Medical Image Segmentation with Vision-Language Models | *Undergraduate Thesis*

Tech: Python, PyTorch, Federated Learning, LoRA, FedProx, LLaVA-Med, MedGemma, BraTS
Developed a federated learning framework for glioma segmentation using BraTS MRI data, fine-tuning LLaVA-Med and MedGemma across distributed clients and achieving a Dice score of up to 0.817.

Projects

StudyMate | *Local AI Study Assistant* **Tech:** Python, Ollama, RAG, React, FastAPI
Fine-tuned Qwen2.5-3B-Instruct on a custom multi-turn academic dataset using PEFT and Unsloth, and exported a quantized GGUF model for efficient local inference. Built a privacy-focused RAG pipeline supporting document ingestion, contextual question answering, and personalized academic assistance.

Delta Coin | *Mobile Campus Payment Platform* **Tech:** React Native, Expo, Supabase, Stripe
Built a cross-platform mobile payment application supporting peer-to-peer transfers, QR-based payments, two-step authentication, transaction history, budget management, and spending analytics for a cashless campus ecosystem.

Momentum | *Productivity & Finance Tracker* **Tech:** Flutter, Dart, Riverpod, Hive, WorkManager
Built an offline-first Android application for users to track routines, daily activities, and personal finances featuring Riverpod state management, Hive local data persistence, WorkManager background task scheduling, home-screen widgets, and weekly analytics visualizations.

EventFlow | *Event Planning CRM Platform* **Tech:** React, Node.js, Supabase
Built a CRM platform for event planning businesses to manage clients, events, quotations, vendors, schedules, and task checklists through a centralized dashboard.

HarvestGuard | *AI-Powered Agricultural Platform* **Tech:** React, TypeScript, MongoDB, Gemini API
Built a bilingual, offline-first progressive web application for crop management with AI-assisted disease diagnosis and weather-aware agricultural recommendations. Implemented interactive geospatial risk visualization and location-based crop monitoring for farmers.

SPYDER Robot | *IoT Quadruped Robot* **Tech:** Arduino, ESP32, ESP32-CAM, Servo Control

Designed and built a four-legged quadruped robot using 12 servo motors with wireless control through ESP32 and real-time video streaming using an ESP32-CAM module.

Leadership & Activities

East Delta University Photography Club Feb 2025 – Present

Convenor

Directed club operations, team coordination, and external partnerships while organizing **Lens-e Uthsob 2.0**, a nationwide two-day photography contest and exhibition; spearheaded end-to-end event logistics, promotional campaigns, and outreach across sponsors, media partners, judges, and volunteers.

Lens-e Uthsob 2025 – Inter-University Photography Contest & Exhibition Aug 2025

Coordinator

EDU Placement Day 2025 Oct 2025

Volunteer

Awards & Achievements

- **Champion**, Project Showcase – EDU Intra-University Engineering Day 2025

Technical Skills

- **Languages:** Python, C++, JavaScript, TypeScript, Dart
- **AI/ML & Research:** PyTorch, Transformers, LLM Fine-Tuning, PEFT/LoRA, Federated Learning, RAG, Medical Image Segmentation, GANs
- **Web & Mobile:** React, React Native, Flutter, Node.js, FastAPI, Expo
- **Databases & Backend:** Supabase, Firebase, MongoDB
- **Tools & Platforms:** Git, GitHub, Docker, Linux, Vercel, Ollama
- **Embedded Systems:** Arduino, ESP32, ESP32-CAM, Servo Control
- **Creative Tools:** Adobe Photoshop, Premiere Pro, AutoCAD, Canva