

MOHAMMAD ZAID IQBAL FAHAD

Uttara, Dhaka - 1230, Bangladesh

☎ (+880) 1627-939394 ✉ fahadbinrazib@gmail.com 🔗 [linkedin.com/in/zaidfahad](https://www.linkedin.com/in/zaidfahad) 🌐 github.com/zaid-fahad

Education

Independent University, Bangladesh

Bachelor of Science in Computer Science and Engineering (CGPA: 2.71)

Dhaka, Bangladesh

May. 2024 – Present

British Council

GCE International A Levels (Mathematics, Physics, Chemistry) & IGCSE

Dhaka, Bangladesh

May 2022 – May 2023

Honors & Certifications

Bangladesh IT & Innovation Award 2026: Merit Award for XenOS Operating System (Certificate No: 10055)

Information Technology Engineers Examination (ITPEC, Japan / BCC): Fundamental Engineer (FE, Oct. 2024) | Top Rank – IP (Oct. 2019)

1st Runner-Up (Software Track): Project Showcasing & Poster Presentation, CSE Annual Research Day (CARD 2025), IUB

1st Runner-Up: Tech Project Showcase, IUB Programming Week (Autumn 2025) – IUB NEST Platform

IUBPC Best Programmer Award: Conferred for technical leadership and software infrastructure impact, Spring 2026

BUET BK-IAC: Professional Certification in Python Programming | **dSAT:** 1110/1600 (May 2024 | Locator: 4097969318)

Technical Skills

Embedded Systems & IoT: Automotive Grade Linux (AGL), LVGL, ROS 2, NVIDIA Jetson, Arduino, MQTT, SocketCAN / CAN Bus, Microcontrollers (ESP32/STM32)

Edge AI & Computer Vision: Multimodal VLMs (Gemma 4), TensorRT-accelerated YOLO, Visual-Inertial Odometry (VIO), Intel RealSense Depth, OCR & Biometrics

Languages & Backend: Python (FastAPI, Django), C, Dart (Flutter), JavaScript, TypeScript, PHP, SQL, Shell Scripting (Bash), HTML/CSS

Frameworks & Cloud/Dev Tools: Astro, Next.js, React, Tailwind CSS, Supabase, PostgreSQL, WebSockets, Linux Daemon Engineering, Docker, Git, Figma

Professional Experience

Arcane Hive

Product & Mobile Solutions Architect

May 2026 – Present

Dhaka, Bangladesh

- **Project EV (2-Wheeler Smart Cluster):** Engineered an embedded digital instrument cluster for electric two-wheelers using LVGL; developed a companion Flutter application handling real-time BLE telemetry syncing, trip metrics, and turn-by-turn navigation updates.
- **Arcane Volt Dashboard:** Architected a web-based IoT monitoring platform interfacing with non-invasive hardware retrofitted onto utility electricity meters for live power usage telemetry, peak load analytics, and automated reporting.
- **Bongshal.com Unified Platform:** Architected and deployed an end-to-end multi-role Flutter application, unifying consumer commerce (Customer), garage job card tracking and repair servicing (Workshop), and inventory fulfillment (Vendor) within a single codebase.

JaduPC

Research & Design Engineer

Sep. 2024 – Mar. 2026

Dhaka, Bangladesh

- **Automotive Embedded Systems:** Engineered high-fidelity digital instrument clusters for **Automotive Grade Linux (AGL)** using Embedded Flutter to visualize vehicle CAN bus metrics in real time; conducted architectural research on next-gen infotainment system fluidity and embedded resource management.
- **Enterprise Kiosks:** Architected high-throughput Self-Checkout terminals, Food Ordering kiosks with thermal printing and kitchen synchronization, and Healthcare Kiosks for automated queue routing and medical report dispatch.
- **Biometric Identity (eKYC):** Deployed a Flutter-based verification terminal utilizing dual-camera facial recognition and automated OCR document validation for real-time customer onboarding.
- **Systems Engineering & IoT:** Authored a low-level Linux daemon in C for persistent MQTT data streaming to remote databases and integrated IoT telemetry hardware for live vehicle diagnostics.
- **Internal Tooling:** Developed a Flutter remote device support frontend and a background automation utility for operational workflow optimization.

Key Engineering Projects

Falcry Autonomous Drone System | *ROS 2, NVIDIA Jetson, Gemma 4, YOLO,*

Jan. 2026 - Present

- **Bi-Hemispheric Avionics Partitioning:** Decoupled non-deterministic mission reasoning from hard real-time inner-loop flight stabilization by deploying ROS 2 on an NVIDIA companion computer alongside a dedicated deterministic flight controller.
- **Perception & Semantic Reasoning:** Built a TensorRT-accelerated YOLO pipeline to extract dynamic obstacles; integrated an onboard multimodal vision-language model (**Gemma 4**) executing in parallel to evaluate camera feeds and command reactive path adjustments.
- **Obstacle Avoidance & GNSS-Denied Navigation:** Synthesized forward Intel RealSense depth feeds for evasive trajectory planning; sustained drift-free positioning in GNSS-denied environments by bounding VIO drift using nadir imagery matched with georeferenced satellite elevation maps.
- **Telemetry Backbone:** Engineered a low-latency, event-driven telemetry and fail-safe monitoring architecture using MAVLink/MQTT and FastAPI for real-time flight operations.

IUB NEST Platform & Course Planner | *Next.js, Astro, Tailwind CSS, Supabase, Cloudflare Pages*

2025 – 2026

- **Campus-Scale Deployment:** Directed product engineering of the university student companion platform, scaling to **4,000+ total users** (1,500+ DAU); recognized with 1st Runner-Up honors across university technical showcases.
- **Algorithmic Optimization Engine:** Engineered a 4-step schedule generator in Astro and Tailwind CSS resolving advising conflicts via day limits (2/3/4 days), time slots, and ranking preferences with automatic theory-lab co-requisite linking.
- **Academic Simulation & Local-First Sync:** Built a retake optimizer, live CGPA impact simulator, 1-click HD wallpaper export, peer share URLs, and local-first data privacy sync.

IUBPC Gate Keeper | *Next.js, Supabase, Tailwind CSS, QR Verification, PostgreSQL*

2025 – 2026

- **Faster Entry & Kiosk Mode:** Replaced manual spreadsheet check-ins with sub-second QR/ID scans and deployed a Self Check-In Kiosk Mode, eliminating venue bottlenecks for 200+ attendees; synced headcounts in real-time via Supabase subscriptions.
- **Dynamic Registration & Analytics:** Implemented digital door registration and automated post-event PDF/Excel reporting with peak arrival analytics.

SpeakBridge Smart Buzzer System | *Arduino, Node.js, WebSockets, Express, JaduPC Starter*

2026

- **Hardware-Software Precision:** Built an integrated buzzer system for spelling bee competitions, capturing physical button presses with millisecond precision and broadcasting state to a live web dashboard over WebSockets to eliminate human judging latency.

Volunteer Management Portal (DoSA) | *PWA, Django, NextJS, PostgreSQL*

Dec. 2025

- Architected the official Progressive Web App (PWA) for the Division of Student Affairs (DoSA) to digitize university volunteer coordination, replacing manual Google Sheets with a scalable workflow.

Foundational Experience

Design & Beyond

WordPress Developer

July 2022 – Dec. 2023

Dhaka, Bangladesh

- **Commercial Deliveries:** Spearheaded digital transformation from Figma prototypes to live WooCommerce platforms with custom service-booking logic (Athnic World) and hybrid LMS appointment workflows (Cassbeenlashed).

Onirban Bangladesh

Project Coordinator & Web Developer

Dec. 2021 – May 2022

Dhaka, Bangladesh

- **Enterprise Portals:** Coordinated development of a 30-page international portal for Penny Appeal AU featuring secure donation funnels, dynamic event management, and responsive retail store deployments.

Leadership & Technical Mentorship

IUB Programming Club (IUBPC)

Sub-Executive & Senior Developer

Jan. 2026 – Present

Dhaka, Bangladesh

- Direct end-to-end student club operations, administrative pipelines, and manage structural event frameworks within the university ecosystem.
- Serve as core technical instructor for the IUBPC Dev Fellowship Program, delivering advanced application development curriculums and mentoring junior engineers.