

FAHAD NADIM ZIAD

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Profile

Software developer and Computer Science graduate with hands-on experience building **full-stack web applications, internal workflow platforms, REST APIs, SQL databases, dashboards, automation, and AI-enabled systems**. Currently working as **Officer (Software Development) at Upay**, translating business needs into maintainable software and reporting workflows. Comfortable across requirements, system design, implementation, debugging, documentation, and stakeholder communication.

Education

BRAC University | *B.Sc. Computer Science – AI & ML Specialization* May 2022 – May 2026
Dhaka, Bangladesh

- **CGPA: 3.72 / 4.00**; Merit Scholarship Recipient; B.Sc. thesis grade: A.
- Coursework: Data Structures & Algorithms, OOP, Database Systems, Software Engineering, Operating Systems, Networks, AI, Machine Learning, NLP, and Pattern Recognition.

Technical Skills

Languages	Python, TypeScript, JavaScript, SQL, C/C++
Front End	React, Next.js, HTML5, CSS3, Tailwind CSS, shadcn/ui, Vite, responsive interfaces
Back End	FastAPI, Flask, REST APIs, authentication, JWT, RBAC, session handling, async workflows, report generation
Data	PostgreSQL, MySQL, SQLite, SQLAlchemy, Prisma, relational modeling, queries, migrations fundamentals
AI / ML	PyTorch, Hugging Face Transformers, PEFT/QLoRA, scikit-learn, TensorFlow/Keras, pandas, NumPy, OpenCV
Engineering Tools	Git/GitHub, Docker basics, Linux/CLI, Vercel, debugging, technical documentation, AI-assisted development with manual verification

Professional Experience

Officer (Software Development) | Upay (UCB Fintech Company Limited) Jun 2026 – Present
Full-time, On-site – Dhaka, Bangladesh

- Develop internal software, workflow tools, dashboards, reporting systems, and automation for HR, leadership-facing operations, and cross-functional fintech processes.
- Gather requirements, define workflows and feature priorities, evaluate implementation approaches, and translate operational needs into scoped software plans and documentation.
- Coordinate with business teams and external vendors while reviewing ERP, HR, CRM, and workflow products for process coverage, data needs, integration effort, operational risk, and long-term value.

Process Reengineering Intern | United Commercial Bank PLC (UCB) Feb 2026 – May 2026
MD Secretariat, Software Engineering – ICCD Head Office – Dhaka, Bangladesh

- Designed and developed **ICCD WorkDesk**, replacing Excel/email task coordination for a 100-person compliance division with role-aware ownership, audit trails, forwarding chains, reporting, and management visibility.
- Defined task lifecycles, delegation rules, deadlines, attachments, activity history, workload views, and exports around real operational bottlenecks and compliance constraints.
- Produced PRD-level requirements and architecture plans for a React, FastAPI, and PostgreSQL system with REST APIs, RBAC, sessions, asynchronous reports, and maintainable deployment boundaries.

Flagship Software Projects

ZeroTex – Full-Stack Resume Builder | *Next.js 15, React, TypeScript, Tailwind, LaTeX, Vercel* 2025

- Built and deployed zerotex.vercel.app, converting structured form data into customizable resumes with responsive editing, live preview, custom sections, theme controls, and drag-and-drop ordering.
- Designed reusable section state and template-driven LaTeX generation to keep editing, ATS-friendly PDF export, and Overleaf handoff synchronized as content and ordering change.

ICCD WorkDesk – Enterprise Workflow Platform | *React, FastAPI, PostgreSQL, SQLAlchemy, RBAC* 2026

- Designed the relational model and REST-backed task lifecycle for assignment, delegation, deadlines, attachments, immutable activity history, role-aware dashboards, workload analytics, and management reports.
- Separated interface, API, and persistence concerns while accounting for authentication, authorization, sessions, auditability, background reporting, and internal deployment.

Selected Software Projects

- CourseHUB – Course Management System | Python, Flask, MySQL, authentication, RBAC2025
 - Built a database-backed course platform with role-based dashboards, enrollment workflows, resource management, search, CRUD operations, analytics, and responsive light/dark interfaces.
 - Structured authentication, authorization, relational data access, and administrator workflows to keep student, instructor, and management actions clearly separated.
- Last Stand Arena – 3D Battle Royale Shooter | Python, PyOpenGL, enemy AI, custom physics2025
 - Engineered a real-time 3D shooter without a commercial engine, integrating rendering, movement and collision logic, weapons, enemy behavior, camera modes, power-ups, and a shrinking safe-zone system.
 - Coordinated physics, input, AI decisions, camera transforms, UI, and rendering order inside a responsive frame-based game loop.
- Red Light, Green Light – 3D Survival Game | Python, PyOpenGL, state machines, collision detection2025
 - Built randomized Stop/Go phases, sprint and stamina systems, gravity-based jumping, projectile physics, collision handling, scaling difficulty, HUD feedback, and leaderboard behavior.
 - Used explicit state transitions and real-time movement checks to enforce gameplay rules while keeping difficulty progression and player feedback predictable.

AI & Research Engineering

- C-MAT – Cross-Modal Aligned Transformer | B.Sc. thesis, PyTorch, Transformers, MRI, EEG2026
 - Designed a dual-stream transformer for neurodegenerative disease assessment, aligning MRI and resting-state EEG representations through contrastive learning with modality dropout for missing-input handling.
 - Built ETL for 1,400+ multimodal records with MRI registration, EEG artifact rejection, spectrogram conversion, SHAP analysis, and Attention Rollout.
- BioAlign-QLoRA – Biomedical LLM Adaptation | Hugging Face, PEFT/QLoRA, PyTorch, embeddings2025
 - Curated and aligned 68,444+ gene-disease pairs from CTD; fine-tuned Llama-3, Mistral, and Phi-3-style models using parameter-efficient QLoRA.
 - Compared base and adapted embedding spaces using a custom separation metric and visualization, covering model evaluation, error interpretation, and technical research writing.
- BUSI Breast-Ultrasound Multi-Task U-Net | PyTorch, OpenCV, Albumentations, segmentation2025
 - Cleaned image/mask data with perceptual hashing and clinically focused filtering, then trained joint segmentation and classification models achieving Dice 0.854, mIoU 0.782, and classification accuracy 0.875.
- Multi-Text NLP Classification Study | BOW, TF-IDF, GloVe, RNN/GRU/LSTM/BiLSTM2025
 - Compared sparse and dense text representations across classical and neural classifiers using accuracy, class-level precision/recall/F1, confusion matrices, and recurring-error analysis.

Engineering Practice

Software Design	Requirements analysis, API and relational data modeling, modular architecture, role-aware workflows, auditability, documentation, and maintainability
Quality	Manual verification, debugging, edge-case review, generated-code inspection, model/output evaluation, clear issue reporting, and iterative improvement
Collaboration	Stakeholder discovery, vendor/product evaluation, technical writing, async communication, teamwork, and explaining technical decisions to non-technical users

Additional

English: IELTS 7.5 overall (L 8.0, R 8.0, W 6.5, S 7.0) | **Bengali:** Native
Selected recognition: Silver Explorer Award, UNIV International Poster Competition (2025) | **Training:** AWS ML Foundations; Generative AI with AWS