

AYAZ AHMED

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SUMMARY

Full Stack & Systems Engineer - final year CS student with hands-on experience building production grade secure distributed platforms, low latency systems, real-time interface pipelines, stateful agentic loops and containerized CI/CD systems. Multiple national hackathon winner. Seeking roles as Agentic AI, Full-stack or Quantitative developer.

SKILLS

Languages: C++, Python, Java, Rust, JavaScript, R, SQL

Backend: FastAPI, Node.js/Express.js, Tokio Axum, gRPC, REST APIs

Frontend: React.js, Next.js, HTML5 Canvas, Tailwind CSS

Infra & DevOps: Docker, Docker Compose, CI/CD(GitHub Actions / GitLab CI), PostgreSQL, MongoDB

AI/ML & Data: PyTorch, NLP, ONNX Runtime, MCP, YOLO11, Nextflow, FAISS/vector search

Core CS: Data Structures & Algorithms, DBMS, OS, System Design, Agile

EXPERIENCE

Software Engineer (Freelance)

May 2026 - Jul 2026

Node.js, Python, PostgreSQL, Docker, MySQL

- Migrated an agency client's legacy PHP/MySQL inventory system to containerized Node.js + PostgreSQL stack reducing average page load latency by 45% and eliminating manual deploys by CI/CD pipeline.
- Developed a Node.js WhatsApp Business API tracking assistant that deflected 30% of routine customer support tickets; integrated a webhook service with backends and an NLP intent classifier to automate scheduling requests.

PROJECTS

Totem Runtime Studio | *Rust, Tokio, Axum, MCP, gRPC*

[GitHub](#)

- Built a Rust based AI execution runtime optimizing LLM token utilization and DAG parallel scheduling (Tokio JoinSet), reducing latency by 40% while building an MCP tool registry with salience weighted context eviction.
- Implemented CAPSEM, a zero-trust security manager securing 10K+ daily compliance grade execution events with heuristic prompt injection detection and tamper evident BLAKE3 hash-chained audit logger for tool invocations.

Custom Compiler & Sandboxed Bytecode VM | *C++, Systems Architecture, Compiler Fundamentals*

[Github](#)

- Built a compiler toolchain and stack-based sandboxed VM for custom Luna language, implementing a zero-copy LL(1)/LL(2) scanner, Top-Down operator precedence parser with $O(1)$ arena allocation and an IR bytecode compiler with a 22+ opcode instruction set eliminating deep call-stack recursion to achieve linear execution at 5.8M ops/sec, 245 MiB/s scanning throughput and 100% syscall I/O isolation.

Aquadex (eDNA) | *Python, Nextflow, FastAPI, Docker*

[Live](#)

- An eDNA analysis platform managing tools like fastp, DADA2, DNABERT-S, EPA-ng, DIAMOND to process 10K+ sequences and novelty detector using FAISS and phylogenetic corroboration, cutting triage latency by 65%.
- Containerised web app with Docker Compose; enforced checksum tracked model versions and optimized asynchronous throughput to process 500+ concurrent requests/min with sub-50ms tracking latency.

Fair Hiring Network | *Python, FastAPI, React, PostgreSQL, REST API*

[Live](#)

- Evidence based hiring & verification platform using 9 specialized agents and cryptographically signed credentials (SHA-256, Ed25519) delivering portable, NFC verifiable skill certificates while deploying fraud screening to block prompt injections, hidden text or AI manipulation.

Drishti (FaceTrace) | *Python, PyTorch, ONNX, WebSockets, MongoDB*

[Live](#)

- Multi-model computer vision pipeline achieving sub 50ms latency at 20 FPS on CPU via graph and thread optimization, integrating binary WebSockets that supports 5+ camera streams and a vectorized matching engine yielding a 60x speedup <3ms for 500+ person watchlists.

EDUCATION

Dr. A.P.J. Abdul Kalam Technical University

2023 – 2027

Bachelors of Technology Computer Science and Engineering

Plato Public School

2019 – 2022

Class XII: 90.4% | Class X: 93.4%

AWARDS & LEADERSHIP

- Winner - Supernova 2025 (3,000+ teams) | HackWithMAIT 2025 (2500+ participants) at Microsoft Office | HACKJNU 4.0 2026 (1200+ participants).
- 4+ additional hackathon wins across ML and full-stack tracks (2024-26).
- Tech Coordinator, Hacknovate - backend operations, managed site infrastructure for international level hackathon.