

Muhammad Afsah Mumtaz



AI Systems · Developer Tooling · Full-Stack Engineering

Dubai, United Arab Emirates

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LinkedIn · GitHub · Portfolio

PROFESSIONAL SUMMARY

BSc (Hons.) Information Technology student at Middlesex University Dubai building local-first AI systems, backend tooling, full-stack products, and interactive web experiences. Built original software across model training, Linux environments, terminal-first knowledge tooling, semantic graphics, and application-scale web systems. Seeking remote roles in AI implementation, automation, developer tooling, backend systems, and technical generalist work.

TECHNICAL SKILLS

LANGUAGES

Python · Rust · TypeScript · JavaScript · C++ · SQL · HTML · CSS

BACKEND / SYSTEMS

Node.js · Express · WSL2 · Linux Environments · XRDP · SQLite
FTS5 · HNSW · Daemons

INFRA / TOOLING

Docker · CI/CD · GitHub Actions · PowerShell · Release
Packaging · CMake · Cross-Platform Scripts

AI / ML

PyTorch · Transformers · PEFT/QLoRA · Ollama · GGUF ·
Retrieval Pipelines · Eval Harnesses · Local Serving

FRONTEND / VISUAL

Next.js · React · Tailwind CSS · GSAP · Three.js · React Three
Fiber · WebGL · GLSL

DATA / PERSISTENCE

MongoDB · Markdown Knowledge Systems · Schema Config ·
Structured Corpora

SELECTED PROJECTS

AVA – Local-First AI Lab

Python, PyTorch, Transformers, PEFT/QLoRA, Ollama, GGUF

- Built a local-first AI stack for training, evaluation, distillation, and serving under severe hardware constraints, including a 4 GB VRAM laptop GPU.
- Produced AVA v2, a QLoRA fine-tune of Qwen3.5-2B that reached 79% ARC-Challenge and 48% GSM8K while training and inference stayed under 2 GB VRAM.
- Opened the full pipeline, evaluation harness, experiment history, and artifacts for reproducibility.

pane – Windows-Native Linux Environment Platform

Rust, WSL2, XRDP, PowerShell, Windows packaging automation

- Built a Windows-native control surface for creating, launching, repairing, and supporting Linux desktop environments on Windows, starting with an Arch-first MVP.
- Designed flows for onboarding, reconnect, repair, reset, diagnostics, support bundles, and packaged entrypoints.
- Productized the system through pane.exe, Control Center workflows, installer shortcuts, validation paths, and release packaging.

MALD – Markdown Archive & Localized Daemon

Rust, SQLite FTS5, HNSW indexing, Ollama, terminal UI, local daemon architecture

- Built a terminal-first knowledge system combining Markdown notes, local AI search, cited RAG chat, semantic indexing, graph features, and automation.
- Designed it as a privacy-first single binary where notes, search, indexing, retrieval, and automation remain local.
- Combined full-text and semantic search, tasks, backlinks, graph views, plugin support, local web serving, and cited AI chat with file and line references.

SMNTC – Semantic Motion Engine

TypeScript, Three.js, GLSL, React, Web Components, CLI tooling

- Built a deterministic visual compiler translating semantic intent into optimized motion and shader behavior.

- Abstracted WebGL and shader complexity into a tokenized intent system.
- Extended it with React bindings, Web Components, schema config, CLI export targets, and performance-aware subsystems.

Entangled – Social Networking Web Application

Vanilla JavaScript, Node.js, Express, MongoDB, Three.js

- Built a single-page social networking app with authentication, feeds, following, messaging, notifications, profiles, search, uploads, bookmarks, and multiple post types.
- Added AI features such as chat, summarization, and code explanation.
- Demonstrated full-stack execution through dense feature integration and immersive interface design.

EXPERIENCE

Chairman, MDX Computing Society

Sep 2025 – Present

Middlesex University Dubai · Dubai, UAE

- Lead the university computing society across technical initiatives, events, and community direction.
- Represent the society across academic and professional contexts while coordinating committee responsibilities.

Committee Chair, BCS Student Chapter

Sep 2025 – Present

BCS, The Chartered Institute for IT · Dubai, UAE

- Chair the BCS student chapter committee at Middlesex University Dubai.
- Support planning and execution across student-led technical and professional initiatives.

Student Voice Leader

Oct 2024 – Present

Middlesex University Dubai · Dubai, UAE

- Act as liaison between students and the programme team on teaching quality, resources, timetabling, assessments, and student experience.
- Consolidate cohort feedback and represent it in structured academic forums.

Customer Service Representative

Oct 2021 – Jan 2022

transcosmos inc. · Debrecen, Hungary

- Worked in a structured service environment requiring communication discipline, issue resolution, and resilience under pressure.

Student Intern

Feb 2017 – Mar 2017

Al Safeer Group of Companies · Sharjah, UAE

- Early exposure to workplace operations, coordination, and structured execution across business functions.

EDUCATION

Middlesex University Dubai

Sep 2024 – Jun 2027

BSc (Hons.) Information Technology

Cambridge International School, Dubai

Completed

A Levels

CERTIFICATIONS

- IBM AI Engineering
- Google IT Automation with Python
- Foundations of Project Management
- Data Visualization and Dashboards with Excel and Cognos

ADDITIONAL

LANGUAGES English (Native) · Urdu (Native) · Arabic (Professional Working) · Hungarian (Limited Working)

AVAILABILITY Golden Visa holder · Open to remote full-time, part-time, contract, freelance, startup, and project-based roles