

RIAD MUKHTAROV

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EXPERIENCE

Artificial Intelligence Engineer

ABB - International Bank of Azerbaijan

Apr 2026 – Present

Baku, Azerbaijan

Head of IT Development Team

European Youth Parliament Azerbaijan

Feb 2026 – Present

Baku, Azerbaijan

- Leading the development team on a full website renewal, internal platform improvements, and new technology solutions supporting organizational operations

Information and Communication Technology (ICT) Assistant

COP29 United Nations Climate Change Conference

Oct 2024 – Nov 2024

Baku, Azerbaijan

- Supported ICT operations for 500+ international delegates in a mission-critical environment
- Resolved real-time infrastructure and hybrid session incidents under strict availability requirements
- Assisted with access control, device hardening, and secure system handling

Head Teaching Assistant - Data Structures

State University of New York at Buffalo

Aug 2022 – May 2024

Buffalo, New York

- Led data structures instruction (asymptotics, graphs, trees, hashing) in Scala/Java for ~1,000 students
- Managed 20 TAs, coordinated labs/exams, and served as the primary liaison between students and faculty
- Built and graded assignments, quizzes, and exams while enforcing academic integrity standards
- Ran weekly reviews and debugging sessions, supporting 200+ students with hands-on help

EDUCATION

University at Buffalo, New York - BS in Computer Science

Awards: Undergraduate Teaching Assistant Award, Multiple Dean's List Honors

Aug 2020 – May 2024

Buffalo, New York

PROJECTS

QuorumRAG.rs [GitHub](#) | Rust, Ollama, Tokio

May 2026

- Built a multi-retriever RAG ensemble with rank fusion and quorum filtering, raising recall from 70% to 95%
- Applied 50% overlapping chunk strides to prevent boundary-split answers, with parallel cached embeddings
- Shipped as a single binary with no Python runtime dependency

almostAykhan – RAG Chatbot [GitHub](#) | Python, FastAPI, OpenAI, FAISS, Docker

May 2026

- Built a two-service RAG pipeline (gateway + QA) that scrapes, chunks, and indexes content via FAISS
- Added trilingual support (AZ/EN/RU) with prompt-injection blocking and distance-gated out-of-scope detection
- Instrumented SQLite observability and a Chart.js analytics dashboard for usage monitoring

Redis Redesign | Rust, Redis

Dec 2025

- Replaced a monolithic cache with two layers: a key/subkey-to-id map and an id-to-value store
- Added TTL lifecycle control to expire stale entries predictably and preserve low-latency access
- Implemented garbage collection for expired entries and dangling cross-layer references

Raft-Based Consensus Algorithm | Go, UDP, Protobuf

May 2024

- Implemented Raft consensus with leader election, log replication, and fault tolerance
- Built concurrent server components to maintain consistency across distributed nodes

TECHNICAL SKILLS

Programming Languages: Rust, Python, Go, C

Backend & Runtimes: Axum, Actix-web, Tokio, FastAPI, Flask

AI, ML & Agentic Systems: LangGraph, LangChain, FAISS, Ollama, LangSmith, NVIDIA OpenShell

Communication Protocols & APIs: gRPC, RESTful APIs, GraphQL, WebSockets, WebRTC

Messaging & Integration: Apache Kafka, RabbitMQ

Databases & Persistence: PostgreSQL, MySQL, SQLite, MongoDB, Redis, pgvector

Cloud, Infrastructure & DevOps: AWS, Supabase, Docker, Kubernetes, GitHub Actions, GitLab CI/CD, Linux

Testing & Quality Assurance: Pytest, rstest, Selenium, Postman