Riad Mukhtarov

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EDUCATION

University at Buffalo, New York - *BS in Computer Science* Aug 2020 – May 2024
Awards: Undergraduate Teaching Assistant Award, Multiple Dean's List Honors *Buffalo, New York*

EXPERIENCE

Information and Communication Technology (ICT) Assistant Oct 2024 – Nov 2024
COP29 United Nations Climate Change Conference *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
- Collaborated with vendors and technical teams to ensure uninterrupted operations

Head Teaching Assistant - Data Structures Aug 2022 – May 2024
State University of New York at Buffalo *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
- Streamlined course logistics and student support workflows to improve consistency and outcomes

Software Engineer Sep 2021 – May 2023
EZ Pro Billing and Collection Inc. *New York, New York*
- Engineered Python/MongoDB TCP handler and ADA-compliant HTML/CSS/JavaScript, using Agile practices
- Automated team point allocation through dynamic login and registration system, upon successful task completion
- Leveraged WebSockets for real-time chat, reducing workload by 90%, earning promotion

PROJECTS

MatchSentinel *GitHub | Java, Spring Boot, RabbitMQ, PostgreSQL, Liquibase, Docker, AWS EC2* Jan 2026
- Designed an event-driven microservices architecture spanning scoring, rules, cases, notifications, and reporting
- Built async inter-service communication with RabbitMQ and idempotent consumers for safe reprocessing
- Implemented per-service databases with Liquibase migrations plus environment-based configuration
- Deployed to AWS EC2 using Docker Compose, Linux networking, and public service endpoints
- Validated production-like deployment using cloud-based infrastructure and containerized services

FinFlow — Wallet API *GitHub | Java, Spring Boot, Spring Security, JWT, MySQL, JPA* Jan 2026
- Implemented secure authentication and authorization using JWT-based stateless sessions
- Designed relational data models using JPA/Hibernate with optimized repository queries
- Applied security best practices including password hashing, token expiration, and request filtering
- Developed integration tests to validate authentication flows and protected endpoints

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

Distributed Hash Table (Kademlia) *| Go, TCP, Protobuf* Feb 2024
- Implemented a peer-to-peer distributed storage system using Kademlia routing
- Achieved efficient $O(\log n)$ lookups and resilient data routing across nodes

TECHNICAL SKILLS

Languages: Java, Python, Go (familiar: Rust, JavaScript, Scala, C)
Backend: Spring Boot, Spring Security, REST APIs, JWT, FastAPI
Architecture: Microservices, Event-Driven Systems, Async Messaging, Idempotent Consumers, Distributed Systems, Audit Logging, System Reliability
Databases: PostgreSQL, MySQL, MongoDB, JPA/Hibernate, Liquibase, SQL
Cloud/Infra: AWS EC2, Linux, Docker, Docker Compose, SSH, Environment-Based Configuration
Testing/Tools: JUnit, Testcontainers, Integration Testing, Git, GitHub, CI/CD Basics