Mohammad Pervaiz

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Education

Queens College, City University of New York **May 2027**
Bachelor's in Computer Science **GPA:** 3.8 / 4.0

Coursework: Software Engineering, Database Systems, Data Structures, Algorithms, Theory of Computation

Experience

Bloomberg LP **June 2026 – August 2026**
Software Engineering Intern (Returning) *New York, NY*

Bloomberg LP **June 2025 – August 2025**
Software Engineering Intern *New York, NY*

- Built a centralized and scalable Kafka-based CDC pipeline for 26K+ employees, replacing inefficient batch jobs
- Delivered IAM-guarded updates from 5+ upstream services by implementing batching in a distributed system
- Engineered fault-tolerant and reliable updates to 3+ ETL consumers using exactly-once with Kafka transactions
- Secured 100% monitoring coverage for poller errors by adding alerts via dashboards for logging and telemetry
- Developed 150+ automated unit, integration, and system tests within Docker securing ~90% code coverage

Morgan Stanley **December 2024 – January 2025**
Software Engineering Intern *New York, NY*

- Expanded coverage for 10+ JSON fields in a validation REST API with schema checks before deprecation
- Prevented outages by blocking 100% of invalid payloads, ensuring data integrity for dependent trading systems
- Wrote unit tests for 20+ API endpoints and collaborated with compliance to meet regulatory requirements

People Inc **June 2024 – August 2024**
Software Engineering Intern *New York, NY*

- Shipped user-facing features for People.com (8M+ daily visits) and Entertainment Weekly (1M+ daily visits)
- Scaled site functionality with 270M+ monthly viewers while ensuring 100% ad revenue integrity via profiling
- Standardized development across 40+ brands by integrating reusable components into People Inc's monorepo

Projects

Multiplayer Game Server | *C++17, CMake, Winsock2, TCP Sockets, MinGW-w64* GitHub

- Built a TCP multiplayer game server with client threads, an authoritative state, real-time chat, votes, and roles
- Designed a packet protocol for chat and votes with a thread-safe queue, socket I/O, and round-based updates
- Set up CMake builds on Windows via Winsock2, clean shutdown flow, disconnect handling, and client recovery

In Memory Cache | *Python, Gevent, TCP Sockets, Redis Serialization Protocol* GitHub

- Achieved 7.1K ops/sec with 100% success under load, sustaining 6K+ ops/sec with up to 20 concurrent workers
- Optimized request path for 0.26ms avg GET latency and 0.34ms avg SET latency in single-threaded tests
- Implemented RESP over TCP sockets with async networking, supporting GET, SET, TTL, and AOF persistence

Skills

Languages: Python, C++, Java, SQL, Bash

Technologies: Kafka, Redis, PostgreSQL, MongoDB, FastAPI, Gevent, Docker, Linux, Git, Grafana, Humio, CMake

Interests: Distributed systems, Networking, Infrastructure