

# Abdalla Mohamed

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## EDUCATION

**Ph.D. Student in Computer Science**  
**University of Texas At Arlington**

**Started: 08/2025**

GPA: 4.0/4.0

**B.S. in Computer Science**  
**Carnegie Mellon University**

**Graduated: 05/2023**

GPA: 3.45/4.0

## WORK EXPERIENCE

**Carnegie Mellon University | Doha, Qatar | Research Assistant** | 04/2025 - 08/2025

- Designed and delivered hands-on computer science and robotics workshops for audiences ranging from elementary students to working professionals, translating complex technical concepts into accessible material
- Developed and maintained technical curricula and instructional materials covering programming, algorithms, and robotics systems
- Debugged and repaired robotic hardware and software systems, diagnosing sensor, control, and integration issues to ensure reliable operation during sessions
- Evaluated and experimented with multiple robotics platforms to assess suitability for future educational deployments
- Collaborated with faculty and outreach staff to plan and execute technical camps and training programs at scale

**Avey | Doha, Qatar | Full Stack Engineer** | 03/2024 - 11/2024

- Built and maintained web applications using Django with RESTful APIs and React frontends
- Designed clean API interfaces and integrated frontend components for responsive user experiences
- Provided on-call production support, diagnosing and resolving system failures under time constraints
- Improved system stability by quickly mitigating outages and performance issues

**Snoonu | Doha, Qatar | Software Engineer** | 04/2023 - 03/2024

- Designed and implemented backend services using C# and .NET, contributing to production-scale systems used by thousands of users
- Developed standalone SaaS components, supporting business expansion and revenue growth
- Debugged and optimized backend services to improve system reliability and performance
- Collaborated with cross-functional teams to deliver features end-to-end in an agile environment

## PROJECTS

### Clustering on MapReduce and MPI | Java and C

Implemented parallel K-means using MPI and HadoopMapReduce, then compared their performance. - Conducted a scalability study on the MapReduce implementation analyzing the impact of the number of map slots, HDFS block size and the number of machines on performance.

### Distributed File System and Access Kit | Java

Built a Distributed Remote File Storage System. Used RMI-invocation for communication between entities. Implemented coarse-grained locks to synchronize access to the file and avoid deadlocks. Improved access time by intelligent replication of files.

### Video Content Distribution Networks (CDN) | C

Augmented an HTTP proxy by adaptive bitrate selection using throughput estimation to stream the highest quality encoding possible. Implemented DNS load balancing using round-robin and geographic distance to spread the load of serving videos among multiple servers.

### **BitTorrent | C**

Developed a Peer2Peer BitTorrent-like file transfer application that enables simultaneous upload and download of chunks of files. Implemented Slow Start, Congestion Avoidance, Fast Re-transmit and Fast Recovery mechanisms on top of UDP to ensure fair, reliable, and efficient network utilization.

## **COURSES**

## **SKILLS**

C | C++ | C# | .NET | Python | Java | ML | Javascript | React | PyTorch  
| Linux | Docker | Github | Kubernetes | GitLab | GitFlow  
| MySQL | SQL

## **TECHNICAL STRENGTHS**

Django Framework | Computer Networks | Algorithms and Data Structures | Agile and Scrum

## **AWARDS**

- **Dean's List for 2 semesters** at CMU

## **COMMUNITY**

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