Aisha Mohamed

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Aspiring machine learning engineer. Published research in ML conferences. Interned at Amazon and experienced with Agile and Scrum framework. Domain knowledge in ML, LLMs, and prompt engineering. Eligible for OPT in the USA for 3 years.

EDUCATION

M.S. in Computer Science   **Expected: 05/2024**
University of Wisconsin–Madison   GPA: 3.75/4.0

B.S. in Computer Science   **Graduated: 05/2018**
Carnegie Mellon University   GPA: 3.82/4.0
Andrew Carnegie Scholar, College honors, and University honors

WORK EXPERIENCE

Amazon Inc. Prime Video | Seattle, WA | Applied Scientist Intern   **| 06/2022 - 09/2022**
- Built refined dataset of playback sessions with context features from raw dumps using AWS tools.
- Designed, and implemented a Random Forest regressor to predict network performance.
- Performed data analysis and visualization and Identified critical features for optimizing the quality and reliability of video playback.

Qatar Computing Research Institute | Doha, Qatar | ML Research Assistant | 07/2018 - 12/2020
- Designed and implemented RDFframes: an open source python framework for efficient and scalable processing of knowledge graphs. It is integrated in the Python PyData software stack. RDFframes processes and exports datasets 2x faster than the state-of-the-art alternative. **Published in VLDBJ 2022, Demo Published in VLDB 2020.**
- Proposed and tested, stratified hits@k, a popularity‑agnostic evaluation metric for knowledge graph embeddings. Investigated popularity bias in state-of-the-art embeddings. **Published in UAI 2020.**

Robotics Institute at CMU | Pittsburgh, PA | Research Intern   **| 06/2017 - 08/2017**
- One of 30 out of 800 undergraduate applicants admitted to the RISS program.
- Used GMM, and MeanShift to improve localization of a robot in autonomous assembly applications.

COURSES

- Open Source Models with Hugging Face from DeepLearning.AI platform
- ChatGPT Prompt Engineering for Developers from DeepLearning.AI platform
- Building Systems with the ChatGPT API from DeepLearning.AI platform

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.

Machine Learning models study | Python
Implemented a basic ML library including Logistic Regression, KNN, SVM, Kernel SVM, and multiple Neural Networks. Compared models' performance on real datasets and artificially generated ones.

End to end speech recognizer using attentional network | PyTorch
Implemented a speech recognition system based on ["Listen, Attend and Spell (LAS)"](#) model. Achieved a word error rate (WER) of 12% on WSJ dataset.

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.

AWARDS

- **Best Scientific Content award** - NewInML, NeurIPS 2019. Recognizes best paper in NewInML forum (acceptance rate is 15%)
- **Andrew Carnegie Scholar** - 2018 recognizes 40 out of 1,500 graduating CMU seniors based on academic excellence, and leadership
- **Google's Women Techmakers (formerly Anita Borg) Scholarship** - 2017 awarded to 20 students in Europe, Middle East and Africa
- **GHC16 scholarship** - 2016 to attend Grace Hopper Conference
- **Dean's List for 6 semesters** at CMU

SKILLS

Python | C | C++ | MatLab | Java | ML | Javascript | React | PyTorch | TensorFlow
| Linux | Docker | GitLab | GitFlow
| MySQL | SQL | SPARQL | RDF | MySQLWorkbench

TECHNICAL STRENGTHS

Machine Learning | LLMs | Algorithms and Data Structures | Agile and Scrum | Computer Networks

COMMUNITY

- Teaching Assistant for Programming II (OOP in Java) and Programming III (Linux tools & advanced data structures and algorithms) courses
- Mentor for undergraduate students
- Officer in Student chapter of the Association for Computing Machinery at the UW-Madison
- Volunteer in App Inventor Workshop at QCRI - 2018
- President of the Computing Club at CMU-Qatar - 2017
- Student Ambassador and Active leader for Arab Women in Computing – Qatar - 2017
- Member of Women in STEM club at CMU-Qatar -2017
- Volunteer in Mind-Craft and CS-4Qatar outreach workshops
- Mentor for first-year students based on a professor nomination -2017