OSAMA DABBOUSI

2 Roslyn Pl., Boston, Massachusetts, 02130 | (617) 650-9335 | osama.dabbousi@gmail.com
www.github.com/OsamaDabb/

EDUCATION

King Abdullah University of Science and Technology (KAUST) — **Thuwal, Saudi Arabia**
Master of Science in Computer Science — *Expected December 2025*

Relevant Coursework: Distributed Systems, Databases, Numerical Linear Algebra, Numerical Optimization.

Boston University, BU Faculty of Computing & Data Science — **Boston, MA**
Bachelor of Science in Data Science, *Summa Cum Laude* — May 2024

Relevant Coursework: Computer Systems, Algorithms and Data Structures, Software Engineering, Natural Language Processing, Stochastic Algorithms, Deep Learning, Reinforcement Learning.

WORK EXPERIENCE

Boston University — **Boston, MA**
Teaching Assistant — *January 2023 - May 2024*

- Courses: Intro to Algorithms, Natural Language Processing, & Probability and Statistics.
- Led discussion sections and held office hours for 20-30 students, breaking down complex material to make it more accessible.
- Provided individualized feedback, helping students troubleshoot assignments and enhance their understanding of key concepts.

Aramco Americas — **Boston, MA**
Data Science Intern — *June - August 2023*

- Produced a retrieval-augmented generation (RAG) pipeline capable of querying thousands of academic articles for well-cited and accurate answers to user questions.
- Designed interface that leverages LLMs to answer questions using cited excerpts of relevant academic texts.
- Launched a user-friendly web application, enabling company employees to seamlessly access the pipeline.

Aramco Americas (Patent Pending) — **Houston, TX**
Data Science Intern — *June - December 2022*

- Developed pipeline capable of creating a benchmark data-set of geological thin sections of over 10,000 images.
- Created a CNN-based program that extracted and filtered over 50,000 images from academic articles.
- Produced a set of weakly supervised neural networks to classify the thin sections hierarchically based on the Dunham and Folk geological classifications.

RESEARCH EXPERIENCE

Machine Learning Research Group — *September 2023 - Present*
Boston University

- Collaborated with a team of 8 researchers in the creation of a meta-learning pipeline capable of selecting between dozens of training configurations for the task of cancer classification.
- Created modules that interfaced with the larger pipeline, which were used for data augmentation, feature extraction, and model training.
- Implemented cloud-based model training leveraging a distributed system using SSH protocols.

Directed Study with Professor Wayne Snyder — *June 2021 - December 2022*
Boston University

- Conducted research on audio processing with deep learning under the supervision of Professor Wayne Snyder.
- Developed pre-processing code for data loading/augmentation/segmentation, label creation, and conversion of audio files to spectral features on 4 different audio-sets spanning hundreds of thousands of samples.
- Designed and coded 12 CNN/RNN neural network architectures optimized for the processing of 5 types of spectral data.

HONORS & AWARDS

BU College of Computing and Data Science (CDS) Academic Excellence Award — *May 2024*

- Recognized as the top undergraduate student at the College of Computing and Data Science for outstanding academic performance, leadership, and collaboration skills.

PATENTS

- "Automated Methods for Generating Labeled Benchmark Data Set of Geological Thin-Section Images for Machine Learning and Geospatial Analysis" – (pending) U.S. patent application No. 18733-1426001. *August 23, 2023*

SKILLS & INTERESTS

Languages: English (fluent), Arabic (fluent)
Technical Skills: Experienced in Java, C++, SQL, Python, PyTorch, Pandas, and Microsoft Office
Interests: Video Game Development, Basketball, Chess, Hiking