

Abed Qaddoumi

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EDUCATION

New York University, Graduate School of Arts & Science, New York, NY
Master of Science, Computer Science, GPA: 3.7

Sept 2021

Queen Mary University of London, School of Electronic Engineering and Computer Science, London, UK
Master of Science, Computing and Information Systems, GPA: 3.9

Sept 2016

TECHNICAL SKILLS

Languages: Python, C++, R, SQL, React, Ruby

ML Frameworks: PyTorch, TensorFlow, Keras, Scikit-Learn, Spark, Pandas, Numpy, SciPy, NLTK, SpaCy, Hugging Face

NLP: BART, BERT, Transformers, Large Language Models (LLM), Retrieval Augmented Generation (RAG), Langchain

Cloud/DevOps/Database: AWS, GCP, Docker, Kubernetes, Git, CI/CD, Airflow, Databricks, Linux, Redis, Terraform

PROFESSIONAL EXPERIENCE

Machine Learning Engineer II: *Gro Intelligence*, Brooklyn, NY

Sept 2021 - Present

- Develop robust and scalable backend systems for AI model training and serving, demonstrating end-to-end product ownership and enhancing decision-making for clients by designing **NLP pipeline** to analyze agricultural data
- Led migration of legacy models to microservices architecture using **Docker** and **AWS Batch**
- Architect and Implement code by adding test and updating **Airflow** scheduling decreasing errors in product by **84%**
- Revamped backend systems by refactoring legacy code into microservices, leveraging **DevOps** tools such as **Terraform**, **Airflow**, **Docker**, and **EC2**, enhancing reliability and reducing costs by **91%**.
- Develop models to simulate **hurricane** risks, land surface **temperature** across the globe, and tomato **yields** in the USA

Graduate Instructor - NYU, Brooklyn, NY

May 2021 - Sept 2021

- CSCI-GA.2590 Natural Language Processing & CSCI-GA.1180-001 Mathematical Techniques for CS Applications

Software Engineer I: *New York University*, Brooklyn, NY

May 2021 - Sep 2021

- Built front-end UI to search databases and implemented features using **ReactJS** and **Postgres** for over **10,000** users
- Developed a feature that allowed users to add their linguistic data to the website's database by optimizing **SQL** queries

Research Assistant: *New York University*, Brooklyn, NY

Sept 2020 - May 2021

- Developed a **Python** script that collects Youtube videos, extracts their audio, and transcribes its text to build a speech dataset
- Coded and tested multiple neural network variants, such as **LSTM** and **GRU**, to add diacritics to Arabic text
- Conducted neurolinguistics research to understand human **cognitive morphology** processes compared to **language models**
- Leveraged NYU **GPU cluster** for model training, running, and testing phases, utilizing containerization via Docker and Slurm for job scheduling to enhance computational efficiency.

Software Engineering Intern: *Synaps Network*, Remote

June 2020 - Sept 2020

- Developed, coded, and tested a new command-line interface text comparison app using **Python**, **NLTK** and **Spacy**
- Developed a script to collect **Youtube** videos' **API** metadata related to Syria, and cleaned the data to categorize the videos

Tech Product Manager: *App House*, London, UK

Jan 2017 - Dec 2019

- Built and maintained 12 iOS applications coded in **Swift** and **Xcode** on Apple's Store with over **1 million** monthly users
- Interviewed and acquired senior-level software engineers within a budget of **\$250,000** over a **6-month** period
- Managed a multi-skilled team to create product and design documentation, manage **Jira** tickets, and monitor project timelines
- Effectively communicated with cross-functional teams to align technical and business objectives, facilitating project success

REFEREED CONFERENCE PRESENTATIONS

1- "Enhancing Arabic Word Embedding with Modified BERT Multilingual" in ArabicNLP 2023

2- "Reconstruction Probing" in Findings of the Association for Computational Linguistics: ACL, 2023

3- "A New Look At A-prefixing in Appalachian English," in American Dialect Society Annual Meeting, 2022

4- "The Shared Task on Gender Rewriting," in Empirical Methods in Natural Language Processing (EMNLP), 2022