Hajar Boughoula

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WORK EXPERIENCE

NASA Mission to Psyche

Software Dev - Student

Sep 2018 - May 2020

- Planned and managed a year-long academic capstone project sponsored by NASA's Mission to Psyche.
- Developed automated NLP tools that successfully recognized and extracted data from 93% of research papers composing the project text corpus.
- Integrated data extraction tools in a web application that dynamically generated an easily searchable database.

Saudi Red Crescent Authority

Software Engineer - Intern

Jan 2022 - Aug 2024

- Supervised tech and software engineering volunteers throughout the development of multiple internal tools.
- Designed and lead the implementations of key software solutions for first responders.
- Performed sprint reviews to provide hands-on demonstrations and overall project progress to stakeholders.

Avionova Tech Team Lead Nov 2024 - Present

- Tech liaison for startup specializing in the development of vestibular technologies designed to address motion sickness and vertigo in high-risk environments such as military aviation, space tourism, and healthcare.
- Oversaw the design, development, and maintenance of the company's website.

EDUCATION

Arizona State University

B.S. in Software Engineering

Graduated: Dec. 2024

• President - CodeDevils

• Webmaster - Delta Sigma ($\Delta\Sigma$)

Major GPA: 3.13

Massachusetts Institute of Technology

Electrical Engineering and Computer Science

Aug 2012 – May 2014

- Member Solar Electric Vehicle Team
- VP of Social Impact MIT Arab Student Organization

PROJECTS

- Iron Meteorite Database Web application wrapped in two Docker containers and using MVC architecture built on a stack of Node/Express and PostgreSQL with a suite of Python tools that utilize natural language processing to automatically extract meteorite information from research papers and deposit the data into a dynamically generated database. The result of this capstone project will assist scientists throughout NASA's Mission to Psyche.
- PlanetCode Collection of Python and Jupyter Notebook tools for processing and analyzing satellite imagery, developed for Planet.com and hosted on a dedicated Django/AWS website. Features include image segmentation and API integration to support advanced data processing workflows. Served as project lead and scrum master for a cross-functional team commissioned to complete the project.
- Smart MOOCs Web application built with Next.js, Redux, and Django to host courses for UIUC, featuring clickstream data analysis through NLP to assist professors in identifying challenging sections in videos and improve lecture content for enhanced student comprehension.

TECHNICAL EXPERIENCE & AWARDS

JCI Ten Outstanding Young Persons Scientific and/or Technological Development Category		2024
 Top 3 Female Chess Players of Saudi 		2022
Badass Woman of ASU Women's Coalition at ASU		2021
Panelist ShapingEDU		2020
• C, C++, Python, Java, SQL	• iOS, Android	

- Matlab, Pandas, Jupyter
- Node.js, JavaScript, HTML, CSS

- ESlint, Junit, PyTest
- Git, Docker, AWS, Atlassian, Jira