

MOUNIR ISSA

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Education

University of California, San Diego

Bachelor of Science in Mathematics and Computer Science (GPA: 3.8)

Sep. 2021 – June 2025

San Diego, California

Coursework

- Advanced Data Structures and Algorithms
- Computer Organization and Systems Programming
- AI: Probabilistic Reasoning & Decision-Making
- Introduction to Computer Vision
- Design and Analysis of Algorithms
- Probability & Statistics
- Principles of Computer Operating Systems
- Deep Learning & its Applications

Experience

ServiceNow, Inc.

Software Engineering Intern

- Incoming Summer 2024 Intern.

June 2024 – September 2024

San Diego, California

Khalifa University - KU Center for Autonomous Robotic Systems

Software Engineering Intern

- Participated in the development of a custom memory model for efficiently handling distributed and local data and worked on code execution control mechanisms for drone mission executions.
- Developed a new mission classification component for the transition of a MATLAB-exported deep neural network to C++, enabling real-time PID, MRFT, and bounding control value computations, eliminating manual data entry, boosting efficiency.
- Utilized the nlohmann JSON library to store calculated values in a shared memory system, ensuring seamless and efficient data exchange among all mission elements - the underlying block behind the HEAR architecture.

July 2023 – September 2023

Abu Dhabi Emirate, United Arab Emirates

Sanford Consortium for Regenerative Medicine - Yeo Lab

Undergraduate Student Researcher

- Participated in the development of quadratic cost functions for RNA molecular localization data, utilizing hybrid quantum solvers like D-Wave to achieve precise cell segmentation without the need for imaging data.
- Processed multi-terabyte and near-petabyte datasets on the Triton Supercomputing Cluster (TSCC), and undertook the project involving the computation of cell geometry.

June 2023 – Present

San Diego, California

Hailocigu Data Science Institute (HDSI)

Instructional Assistant

- Incoming Winter 2024 Data Science instructional assistant at the Hailocigu Data Science Institute.

January 2024 – March 2024

San Diego, California

Projects

Crime Analysis | Python, Sci-kit learn, Visual Studio Code

- Delved into decades of US crime statistics spanning 1960-2019, transforming raw data into actionable insights. Leveraged Seaborn for in-depth correlation analysis and efficient data extraction alongside Matplotlib for data visualization.
- Pioneered predictive modeling using sci-kit-learn, implementing a robust linear regression algorithm. This innovation empowered data-driven forecasts, enabling proactive crime prevention strategies

July 2022

The Game of Life | C, Linux, Vim, Bash

- Implemented Conway's Game of Life on a Linux server using C and Assembly programming languages.
- Leveraged C for high-level logic and Assembly for low-level optimizations, resulting in significant performance enhancements, making the game run efficiently for software optimization.
- Used the Vim text editor in the creation, testing, and launch processes.

March 2023

Cellular Automaton | Java, Eclipse, JavaFX

- Designed and implemented a comprehensive 1-Dimensional Cellular Automaton simulator in Java, featuring the full Automaton class, to demonstrate proficiency in object-oriented programming and algorithmic design.
- Created an interactive main program that allowed testing and visualization of cellular automaton rules, including Rule 4, 126, and 130, as well as exploring custom rules.
- Adapted the cellular automaton to handle a larger rulespace with rules[32], enabling the exploration of new and intriguing patterns and behaviors beyond the standard 8-bit rules.

November 2022

Technical Skills

Languages: Python, Java, C, C++, HTML/CSS, JavaScript, MySQL, MATLAB, Bash, PostgreSQL

Developer Tools: Linux, VSCode, Eclipse, DBeaver, Postman

Technologies/Frameworks: Ubuntu 20.04, GitHub, Git, JUnit, NodeJS, ExpressJS, ReactJS, NextJS