



# Meena Al Hasani

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## EDUCATION

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### University of Houston

Bachelor of Science in Computer Science, Minor in Mathematics

Dec 2025

Major GPA: 3.4064

**Relevant coursework :** Algorithms and Data Structures, Software Design, Database Systems, Data Science I & II, Statistics, Software Engineering, Artificial Intelligence

## SKILLS

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**Languages:** Python, JavaScript, TypeScript, C++, C#, SQL, MATLAB

**Frameworks/Libraries:** React, PyTorch, TensorFlow, ASP.NET Core, Express.js, Node.js, Jest, Tailwind CSS

**Tools/Platforms:** Git, Jupyter Notebook, MySQL, Azure SQL, Microsoft Office (Certified), WebGL, JWT

**Other:** Fluent in written and spoken Arabic

**Dean's List:** Fall 2019, Spring 2020, Spring 2021, Fall 2024, Spring 2025

## PROJECTS

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### Unemployment Forecasting Using ML | Python, TensorFlow, LSTM, GRU, Matplotlib Feb 2025 – May 2025

- Built industry-specific LSTM/GRU models to forecast unemployment trends, achieving under 10% MAPE in key U.S. sectors.
- Engineered time series preprocessing pipelines, enabling sector-based seasonal and trend detection.
- Visualized model outputs and confidence intervals to support economic insight and workforce planning.

### Stock Price Prediction | Python, GRU, pandas, Seaborn, Matplotlib Mar 2025 – May 2025

- Trained GRU-based deep learning models to forecast stock prices of AAPL, MSFT, and AMZN with <2.2% MAPE.
- Implemented time-window encoding and lag feature engineering for sequence modeling.
- Designed interactive trend visualizations for interpretability of short-term vs. long-term forecasts.

### Hurricane Impact Analysis | Python, scikit-learn, pandas, geopandas, Matplotlib Nov 2024 – Dec 2024

- Modeled hurricane risk using regression and clustering on Gulf Coast weather data from 2021.
- Generated heatmaps and region-level intensity trends using GIS visualizations.
- Delivered a comprehensive report identifying hotspots and temporal storm pattern shifts.

### Zoo Database Web Application | C#, ASP.NET Core, Razor, Azure SQL, Entity Framework Sep 2024 – Dec 2024

- Built a full-stack multi-role portal for zoo employees with dashboards, shop pages, and reporting tools.
- Connected inventory and user-role logic with relational queries and dynamic content rendering.
- Implemented real-time filtering and shop-specific data views using Entity Framework LINQ queries.

### Volunteer Web Portal | Node.js, Express.js, MySQL, JWT, Jest

Jan 2025 – Apr 2025

- Developed secure RESTful APIs for volunteer registration, login, and event management with MySQL backend.
- Applied JWT-based authentication and route-level authorization to protect user roles.
- Achieved 100% Jest test coverage across routes and utilities, improving deployment confidence.

### Space Debris Visualization Tool | JavaScript, WebGL, D3.js, CSV parsing

Aug 2022 – Nov 2022

- Created an interactive 3D globe visualization app for global space debris statistics by country.
- Parsed satellite data into clustered bar/scatter plots, enabling visual filtering by region and altitude.
- Enhanced user experience with globe rotation, zoom, and clickable satellite clusters.

### Rocket Game | C++, OOP, SDL

Dec 2021 – Feb 2022

- Designed an object-oriented game simulating rocket navigation with gravity, collisions, and scoring.
- Applied polymorphism for modularity across obstacles, projectiles, and movement logic.
- Tuned difficulty scaling and performance for real-time gameplay responsiveness.

## ACTIVITIES

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### CS Girls Organization

Aug 2022 – May 2025

- Attend career info sessions, workshops, and student networking events.

### Code Coogs Organization

Aug 2022 – May 2025

- Participate in programming workshops, coding competitions.

### Society of Petroleum Engineers

Aug 2021 – May 2022

- Participate in volunteering events, technical seminars, and networking with professionals in energy and data applications.