

# UMAR ABDUL AZIZ

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## Education

### University of Houston Clear-Lake

August 2023 – May 2025

*Master of Science in Computer Science*

*Houston, Texas GPA:3.95*

## Technical Skills

**Languages:** Python, Java, C, C++, JavaScript, HTML/CSS, SQL

**Developer Tools:** VS Code, Linux, Postman, PgAdmin, MongoDB Atlas

**Technologies/Frameworks:** React, TailwindCSS, Node.js, Flask, Selenium, Express.js, MongoDB, Numpy, Matplotlib, Pandas, Scikit Learn, Ollama, LangChain, AWS, GitHub, Webpack, OpenAI API, PostgreSQL, PgAdmin

## Experience

### Glappy Village

May 2024 — Current

*Software Engineer Intern*

- Built a pioneering chatbot for supporting victims of domestic violence using Meta's Llama3 Large Language Model; the chatbot provides empathetic support in multiple languages.
- Implemented RAG (Retrieval-Augmented Generation) to limit the LLM's knowledge base, preventing the chatbot from answering questions outside the context of supporting victims of domestic violence. This ensured a focused and accurate response to user inquiries.
- Developed a robust Flask Based REST API, ensuring high availability, performance, and scalability for users seeking assistance.

### University of Houston Clear-Lake

April 2024 — Current

*Research Assistant*

- Conducted a thorough audit of existing code, eliminating redundant code and reorganizing code structure for improved readability and scalability
- Refactoring the existing codebase to React and implemented reusable components, reducing redundancy by 45% and improving responsiveness by adding bootstrap CSS.
- Collaborated with program team members to create targeted social media campaigns, increasing brand awareness by 15% and driving more traffic to the website

### PHN Technology

April 2023 — June 2023

*Web Developer Intern*

- Contributed to the development of a responsive Travel Agency platform using HTML, CSS, JavaScript, and React, with a focus on Desktop-first design. Implemented a custom carousel feature that improved user engagement by 25%. Worked closely with the product team to integrate the platform's API with payment gateways like Stripe.
- Collaborated with the full-stack development team to troubleshoot and debug code, and participated in daily stand-up meetings to discuss project progress and goals.

## Projects

### Plagiarism Detection Software | *Python, BeautifulSoup, Selenium, Flask, ReactJs*

October 2023

- \* Developed plagiarism detection software in Python, leveraging selenium and beautiful soup for web scraping.
- \* Implemented custom plagiarism detection algorithm using modified Smith-Waterman algorithm, utilizing Damerau-Levenshtein distance for accurate plagiarism score calculation and provides users with exact web links where the text was plagiarized from.
- \* The Backend was implemented using Flask and frontend with React.

### Apartment Management System | *REACT, Express, Passport.js, PostgreSQL, SQL*

March 2024 – April 2024

- \* Led a team of 3 developers to achieve top honors in class, overseeing the project lifecycle from design to implementation.
- \* Developed a secure login system using Passport.js for random salt-based encryption, ensuring stringent data protection integrated advanced SQL concepts like transactions, triggers, and assertions for robust data management.
- \* Designed a responsive frontend with React, optimizing backend performance through RESTful API.

## Certifications

**Machine Learning Engineer (AI Analyst) | *Symbiosis Skills and Professional University***

February 2023

**Machine Learning with Python | *Freecodecamp***

February 2022

**SQL Beginner to Guru | *Udemy***

October 2020