Ilyas Abdulrahman

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EDUCATION

Michigan State University   **Graduation:** Dec. 2024
Bachelor of Science, Computer Science   **East Lansing, MI**
Dean's List 4/4 Semesters   **Cumulative GPA:** 3.9/4.0

Relevant Coursework By Summer 2024: Data Structures and Algorithms, Object Oriented Programming, Algorithm Engineering, Web Application Development, Database Systems, Computer Systems, Discrete Structures, Calculus I-III

EXPERIENCE

Michigan State University - College of Engineering   **East Lansing, MI**
Teaching Assistant for CSE 331 - Data Structures and Algorithms   *Aug 2023 – Present*

GE Aerospace   **Cincinnati, OH**
Software Engineer Intern   *May 2023 – Present*
- Spearheaded the development of a full-stack web application Proof-Of-Concept integrating with existing data ingestion processes for a Dashboard UI, enhancing the system observability for an internal team of **10+** engineers (**Vue, Node.js, Express, DynamoDB, Docker, JavaScript**).
- Migrated web application to a cloud native and serverless architecture, enabling live querying from a DynamoDB database and reducing application response time by **50% (Python, AWS Lambda, API Gateway, SQS)**.
- Built multiple highly reliable and performance-driven REST APIs that efficiently handle GET and POST requests to query and store data in a DynamoDB database.
- Awarded Most Innovative Hack at company-wide hackathon using the MERN technology stack.

State of Michigan DTMB   **Lansing, MI**
Data Science Student Assistant   *July 2022 – May 2023*
- Developed a program to preprocess text data in over **1500** contracts with an accuracy of **95%** through a multi-layered approach using NLTK for further analysis with machine learning models **(Python, NLTK, NLP)**.
- Led a team of **3** to create detailed reports of vendor data using pandas and NumPy to leverage statistical analyses, resulting in improved decision-making and high-performance vendor evaluations **(Python, pandas, NumPy)**.
- Conducted geospatial data analysis using GeoPandas to identify geographically disadvantaged areas, utilizing third-party API endpoints and presenting results to stakeholders, contributing to evidence-based decision making.

State of Michigan DTMB   **Lansing, MI**
Data Analyst Intern   *July 2020 – Sept 2020*
- Generated reports in Power BI using queries, resulting in an increase to the number of actionable insights found.
- Utilized Microsoft Access to efficiently update and maintain a large database, resulting in improved data accuracy.

PROJECTS

Conversation Translator (Front-End) - *Best Beginner Hack at MSU's semester-long Hackathon*   [Website](#) | [GitHub](#)
- Developed a real-time voice translator web application that supports **15** of the most popular languages in the world and deployed to Firebase **(React, AWS Polly, Azure, Web Speech API, Firebase)**.
- Leveraged React hooks for state management and implemented language switching, speech recognition, and integrated speech synthesis and translation capabilities using AWS Polly and the Microsoft Translator Text API.

SuggestMe (Full-Stack)   [Website](#) | [GitHub](#)
- Developed a full-stack web application that delivers personalized suggestions based on the latest **10** items in a user's search history and deployed to Render **(React, OpenAI API, Flask, Azure MySQL)**.
- Implemented a REST API utilizing Flask to handle CRUD operations within an Azure MySQL database.

News Aggregator (Back-End)   [Website](#) | [GitHub](#)
- Built a back-end web application to aggregate news headlines from 8 popular sites and deployed to an AWS EC2 instance **(Flask, AWS EC2, MySQL, Python, Bootstrap, HTML/CSS, requests, Beautiful Soup, Jinja2)**.

TECHNICAL SKILLS

Languages: Python, JavaScript, C/C++, HTML/CSS
Technologies: AWS, React, Node.js, Express, Vue, MongoDB, SQL, Azure, Flask, NLTK, pandas, Linux/Unix, Git