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 – Aug 2023*
- Spearheaded the development of a full stack web application Proof-Of-Concept integrating with existing data ingestion processes for a Dashboard UI within an agile development team, 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 DynamoDB and real-time metrics of data loads in AWS (**Python, AWS Lambda, S3, API Gateway, SQS, EventBridge**).
- Improved coverage by writing unit and integration tests to validate the functionality of REST APIs that efficiently handle GET and POST requests to query and store data in a DynamoDB database (**Python, REST, Pytest**).
- 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 for further analysis with machine learning models (**Python, NLTK, NLP, scikit-learn**).
- 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 in 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 (Frontend) - *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 (Backend) [Website](#) | [GitHub](#)
- Built a backend 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