

Ilyas Abdulrahman

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EDUCATION

Michigan State University

Bachelor of Science, **Computer Science**

Dean's List 4/4 Semesters

Graduation: Dec. 2024

East Lansing, MI

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

Teaching Assistant for CSE 331 - Data Structures and Algorithms

East Lansing, MI

Aug 2023 – Present

GE Aerospace

Software Engineer Intern

Cincinnati, OH

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 real-time metrics of data loads into S3 buckets (**Python, AWS Lambda, Amplify, API Gateway**).
- 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

Data Science Student Assistant

Lansing, MI

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

Data Analyst Intern

Lansing, MI

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