

# Rahul S. Hoque

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## EDUCATION

### University of Michigan

#### Bachelors of Science in Computer Science

- **Coursework:** Programming and Introductory Data Structures, Discrete Mathematics, Data Structures and Algorithms
- **Activities:** Parkour Club, eSports Club, Baking Club, Michigan Hackers, VOID Tech, SPARK Electric Racing

Ann Arbor, MI

Aug 2023 - Present

### Washtenaw Community College

#### Guest Student

- **Coursework:** Linear Algebra, Microeconomics

Ann Arbor, MI

May 2023 - Present

### Grand Rapids Community College

#### Associates of Applied Arts in Computer Science

- **Coursework:** Elementary Programming Concepts With Python, Elementary Programming Concepts With C++, Calculus With Analytic Geometry II, Introduction to Statistics and Data Analysis
- **Activities:** Honors Program,
- **Awards:** President's List (Fall 2022, Winter 2023), Phi Theta Kappa Honor Society

Grand Rapids, MI

Aug 2022 - Apr 2023

## WORK EXPERIENCE

### Quantum Machine Learning Researcher

#### Researcher

- Programmed 3 quantum classification algorithms with Python and established familiarity with Logistic Regression, Support Vector Machines, and Convolutional Neural Networks using scikit-learn, TensorFlow, and PyTorch.
- Compiled research findings in documentation and GitHub repository for implementations and presented work at annual symposium to 400 attendees.

Ann Arbor, MI

May 2023 - Aug 2023

## PROJECT EXPERIENCE

### University of Michigan

#### VOID Tech Web Developer

- Member of a cross-functional team of 8-10 members at VOID Tech to develop a study group finding web app.
- Utilizing Flask, CSS, HTML, JavaScript (with a touch of Node.js), and AWS services for app development and scalability.
- Implementing PostgreSQL for efficient database management, contributing to the app's responsiveness and performance.

Ann Arbor, MI

Jan 2024 - Present

### Michigan Hackers Web and Machine Learning Developer

- Actively contributing to the advanced machine learning group, specializing in web development integration.
- Collaborating within a team of 4-7 members on semester-long ML projects with a focus on applications in web development, including text summarization, art/music generation, and computer vision.
- Translating ML models into web functionalities, enhancing user experiences and contributing to the practical implementation of machine learning in web applications.

Sep 2023 - Present

### Personal

#### My Anime List (MAL) Recommendation Web App

- Compiled a dataset over 1 week of every My Anime List page using BeautifulSoup and CSV.
- Implemented the compiled dataset to train a content-based recommendation model using a bag-of-words method.
- Retrieved the anime suggested for the user based on the user input and parsed the output into a JSON file and moved the JSON file to a formatted web app used by over 100 users.

Feb 2023 - Present

### Text-Based RPG

- Implemented C++ STL data structures and algorithms including stacks, queues, dequeues, priority queues, and maps to create a text-based RPG, optimizing game performance, and enhancing overall user engagement and satisfaction.
- Utilized rapidJSON for real-time storage and retrieval of player data, ensuring seamless gameplay experiences with minimal latency.
- Developed a web app for user engagement, reaching 50+ users.

Mar 2023 - May 2023

## SKILLS

**Coding:** HTML, CSS, Javascript, TypeScript, Python, C++, LaTeX, JSON

**Libraries:** React, Flask, scikit-learn, TensorFlow, PyTorch, matplotlib, NumPy, Pandas, Beautiful Soup, Plotly, STL, rapidJSON

**Applications:** AWS, Postgres, Git, Figma, VSCode, gdb, Ubuntu, Excel, Powerpoint, Word

**Languages:** Proficient in Bangla

**Soft:** Teamwork, Time Management, Communication, Problem Solving, Leadership, Collaboration