

Mahad Ahmed

613-981-9210 | mahad.ahmed613@gmail.com | [LinkedIn](#) | [GitHub](#) | Ottawa, Ontario

EDUCATION

Carleton University

Bachelor of Engineering in Software Engineering

Ottawa, ON, Canada

Sep. 2021 – Present

EXPERIENCE

Cloud Architecture Software Engineer

Innovation, Science and Economic Development Canada, Full-time

May 2024 – Present

Ottawa, ON, Canada

- To develop and maintain data visualization dashboards using PowerBI, enhancing data-driven decision-making processes within the organization.
- Will leverage Python scripting and AWS technologies to streamline database operations, including data insertion, updating, and modification, within MySQL databases supporting critical research initiatives.

Research and Development Software Engineer

Innovation, Science and Economic Development Canada, Full-time

January 2024 – April 2024

Ottawa, ON, Canada

- Pioneered the development of an automated environment type classification tool as part of a groundbreaking research initiative aimed at democratizing spectrum licensing in Canada
- Leveraged advanced spatial analysis techniques, including geohashing and GeoPandas, to design and implement a robust Python-based software solution capable of classifying environmental types based on geographic coordinates.
- Employed QGIS and Matplotlib for comprehensive data collection, processing, and visualization of shapefiles, enabling the accurate representation of geospatial information and further enhancing the interpretation of environmental characteristics

PROJECTS

Music Bot for Discord | *Python*

June 2022 — Present

- Created a Python-based music bot on Discord that utilizes the Discord API to scrape and play user-requested songs from YouTube.
- Leveraged the Discord API library available in Python 3 to enable smooth communication and interaction between the bot and Discord servers.

Student Support | *JavaScript (React), HTML, CSS*

June 2023 — Present

- Developed a student support website using React framework, JavaScript, HTML, and CSS, providing various resources and advice to upcoming engineering students.
- Provided a range of services, including practice materials for multiple courses, guidance on student issues and a GPA calculator.
- Enhanced the user experience by creating an intuitive and accessible platform for fellow students.

UNO Flip | *Java*

September 2023 — December 2023

- Implemented UNO Flip card game in Java with Graphical User Interfaces (GUIs), incorporating the Model-View-Controller (MVC) design pattern to ensure a modular and scalable structure.
- Developed an AI player with dynamic sizing and implemented sophisticated AI strategies, including random selection of strategies, enhancing the challenge and unpredictability of AI opponents.
- Leveraged Serialization to enable the seamless saving and loading of game states, providing users with the convenience of resuming games at their own pace.

TECHNICAL SKILLS

Languages: Java, Python, C, JavaScript

Developer Tools: Visual Studio Code, JetBrains, Bluej

Operating Systems: Windows, Ubuntu, MacOS

Libraries/Frameworks/Tools: Git, React, Flask, Matplotlib, GoogleTrans, Pandas/GeoPandas, PostgreSQL

Courses: Object Oriented Programming, Data Structures, Computation and Programming, Database Management, Operating Systems