Shraddha Singh

Halifax, NS | 902-225-8157 | sh913738@dal.ca
linkedin.com/in/shraddhasinggh/ | github.com/shrad059 | shrad059.github.io/portfolio/

EDUCATION

Dalhousie University   Halifax, NS
Bachelor of Science in Computer Science and Physics   *September 2021- May 2025*
- Relevant Coursework: Data Structures and Algorithms, Database Systems, Software Development, Web Design and Development, Computer Systems

EXPERIENCE

Undergraduate Teaching Assistant   January 2023 – Present
Dalhousie University   *Halifax,NS*
- TA for CSCI 1120 (Introduction to Computer Systems) and taught basic concepts of computer systems like data and program representation, program translation, and operating systems.
- Held office hours for over 70 students, providing one-on-one support and assistance with course material.
- Key responsibilities includes providing individualized support, creating and managing lesson plans for lab sessions, and evaluating students' understanding of the material.

Embedded Design Software Developer   October 2022 – Present
Dalhousie Solar Car   *Halifax,NS*
- Contributed to the development and maintenance of software for the solar car team by utilizing Python and C programming languages.
- Developed and maintained technical documentation for the software and systems.
- Utilized version control software such as Git to manage and maintain the codebase.

PROJECTS

Music Recommendation System | *Python, Pandas, Scikit-learn, Spotify Web API*   January 2023
- Developed a personalized music recommendation system using Python and machine learning techniques which utilized a content-based filtering approach to provide tailored song recommendations based on a user's listening history and track metadata.
- Designed and implemented a data processing pipeline to transform raw song data into a usable format for model training, including handling missing values and feature scaling.
- Utilized Spotify's API to access music metadata and audio features for thousands of tracks, which were used to calculate similarity scores and generate recommendations.

Chat Room WebApp | *Redux, React, MongoDB, NodeJS, Express, socket.io*   January 2023
- Developed a real-time chat room web application using Express and MongoDB database with React as the frontend.
- Utilized socket.io to establish a real-time connection between the user and server for instant messaging.
- Implemented features such as user registration and secure login system, user authentication and authorization, real-time messaging, and online/offline presence indicators.

PathFinding Visualizer | *Python, PyGame, Git*   December 2022
- Developed and implemented the A* algorithm to find the optimal path between two points on a grid.
- Created a user-friendly graphical interface using Pygame library to demonstrate the pathfinding process.
- Allowed users to interact with the visualizer by allowing them to set the starting and ending points.
- Incorporated obstacles, such as walls, to show the effect on the pathfinding process.

TECHNICAL SKILLS

Languages: Java, Python, C/C++, SQL, MongoDB, JavaScript, HTML/CSS
Frameworks: Django, React, Node.js, JUnit, WordPress, Material-UI, Styled-Components
Tools: Git, Docker, AWS, Google Cloud Platform, VS Code, Visual Studio, PyCharm, IntelliJ, Eclipse
Libraries: pandas, NumPy, Matplotlib, Express.JS