Mohammad Shahriar Hossain

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EDUCATION

University of Alberta   Edmonton, AB
B.Sc. Computing Science (Specialization in Software Practice)   *Expected Graduation: May 2025*

RELEVANT COURSEWORK

- Predictive Business Analytics
- Machine Learning I
- Reinforcement Learning Specialization
- Search and Planning in Artificial Intelligence
- File and Database Management (SQL & MongoDB)
- Software Engineering Specialization
- Computer Architecture I
- Operations Management

PERSONAL PROJECTS

Anonymous Feedback Social Media Web Application | *Next.js, TypeScript, MongoDB, Tailwind CSS*   Link
- Designed to facilitate anonymous feedback, enhancing honest communication and community engagement. Pivotal for users seeking a secure platform to share and receive candid feedback without the fear of being identified.
- Utilized Next.js for both frontend and backend using API routes, TypeScript, Tailwind CSS, React.js, npm, zod for schema validation, bcryptjs for password hashing, next-auth for authentication, JWT for token handling, axios for API requests, and shadcn for component library.

Edmonton Housing Data Analysis | *SQL, Python, Power BI*   Link
- Assists newcomers and international students in Edmonton in finding ideal housing through a dashboard with filters for price, room numbers, house size, and community.
- Utilized SQL and Python for data cleaning and analysis; employed Power BI for visualization.

Predictive Modeling and Analysis of Traffic Accidents | *R (ggplot2, dplyr, rpart, tidyr, randomForest)*   Link
- Predicts accident severity using variables such as weather conditions, road type, and time of day, enhancing road safety and traffic management.
- Employed R programming, utilizing predictive models like KNN, LDA, and Random Forest.

EXPERIENCE

Software Developer Co-op   May 2024 – Present
SensiImage Technologies Ltd.   *Edmonton, AB*
- Developing the graphical user interface (GUI) for the HandCOMM display module using Python libraries (PyQt, Tkinter, Pygame) to create an intuitive and responsive main display unit for the flagship product, deployed on Raspberry Pi 4 Model B.
- Building the frontend and backend of the company's web application using JavaScript (React.js, Next.js), Tailwind CSS, TypeScript, and MongoDB. Creating RESTful APIs and performing CRUD data operations to ensure a seamless user experience and robust data management.

Tech Solutions Advisor & Omni-Channel Specialist   May 2023 – Sep 2023
Best Buy Canada   *Edmonton, AB*
- Enhanced customer understanding of product features and benefits, contributing to a 15% increase in customer purchase decisions.
- Developed targeted sales strategies that not only optimized product placements but also led to a notable increase in accessory upselling, with an average of 30 additional units sold per month.

SKILLS/EXPERTISE

Academic Expertise: Software Development, Data Analysis, Data Science, Machine Learning, Artificial Intelligence

Tools and Software: Office 365, Power BI, Tableau, Linux, Android Studio, iOS, Visual Studio Code, Git, GitHub, GitLab, Raspberry Pi, Figma, Lucidchart, Adobe Creative Cloud (Illustrator, Photoshop), Jupyter Notebook

Programming Languages: **SQL**, **MongoDB**, **Python** (scikit-learn, tensorflow, numpy, pandas, matplotlib, seaborn, pyqt, tkinter), **JavaScript** (React.js, Next.js, Node.js, Tailwind CSS), **TypeScript**, **C, C++, C#**, **Java**, HTML, CSS, **R** (dplyr, tidyr, ggplot2, tensorflow, rpart, tidyverse, randomForest), Lisp, Prolog, Assembly (RARS RISC-V), Julia

Cloud Platforms and DevOps: AWS, Azure, Google Cloud, Docker, Kubernetes, Jenkins, Travis CI, GitHub Actions