

AASHNA SADEQUE

Victoria, BC | aashnasadeque4@gmail.com | 250-274-2774 | [GitHub](#) | [LinkedIn](#)

EDUCATION

University of Victoria, Victoria, BC

September 2022 - Current

B.Sc. in Computer Science and Statistics (Data Science)

RELEVANT COURSEWORK

Data Science for Software Engineering

- Applied an end-to-end data science workflow involving data acquisition, cleaning, exploratory analysis, statistical modelling, visualization, and reporting.
- Studied regression, Bayesian inference, machine learning, large language models, research evaluation, and ethical issues involving software data.

Data Analysis and Applied Regression Analysis

- Conducted exploratory data analysis using R and Python to identify patterns, relationships, trends, and anomalies.
- Applied linear and multiple regression methods, evaluated model assumptions, performed regression diagnostics, and interpreted statistical output.
- Cleaned and validated data before analysis and communicated findings through written summaries and data visualizations.

Software Development Methods

- Designed and implemented Python and C programs for managing medical-clinic operations and patient records.
- Developed CRUD functionality using structured file handling, object-oriented programming, and modular software design.
- Applied testing and debugging techniques to verify system functionality and preserve data integrity.

TECHNICAL SKILLS

- **Programming Languages:** Python, SQL, R, Java, C, C++, C#, JavaScript
- **Data Analysis:** Pandas, NumPy, data cleaning and validation, regression, statistical modelling, machine learning
- **Visualization and Reporting:** Matplotlib, Tableau, Microsoft Excel, $\LaTeX$, dashboard development, technical reporting
- **Web and Application Development:** React, HTML, CSS, REST APIs, PyQt6, MVC
- **Testing and Data Management:** unittest, unit testing, integration testing, debugging, CRUD operations, JSON, Pickle, DAO
- **Tools and Platforms:** Linux, Jira, GitHub, Jupyter Notebook, macOS, Windows

PROJECTS

Lead Funnel Warehouse

- Built an E2E lead-funnel analytics project using Python, DuckDB, and SQL that transforms raw session data into a star-schema warehouse (staging, dimensions, fact, marts).
- Wrote 8–10 business-focused SQL analyses (conversion by month/visitor/traffic/device, behavioural summaries) to surface actionable funnel insights.
- Trained and evaluated baseline (Logistic Regression) and non-linear (Random Forest) models with ROC-AUC, precision/recall, and interpretable feature importance visuals.
- Automated the pipeline with reproducible scripts and clean documentation.

Arena Pulse (2nd Place Winner - Victoria Tech Night Hackathon)

- Developed a heatmap-based analytics application during a hackathon to visualize and analyze user activity and engagement patterns.
- Built interactive data visualizations that enabled users to identify high-traffic areas and behavioural trends from spatial data.
- Collaborated in a duo to design, develop, and present the application under a time-constrained environment.
- Selected for further development and transitioned into a paid contract.

Medical Clinic System

- Developed a medical clinic system in Python using the MVC design pattern with a GUI built in PyQt6.
- Implemented data persistence using JSON and DAOs to support reliable storage and retrieval of patient records.
- Implemented unit and integration tests with unittest to validate system functionality and data consistency.

Raspberry Pi Fashion Cyberdeck

- Developing a portable outfit-generation system using a Raspberry Pi 5, a seven-inch touchscreen, and a custom retro-inspired interface.
- Created a personal wardrobe database using photographs of clothing I own and structured metadata describing garment type, colour, style, and compatibility.
- Built functionality for uploading, tagging, organizing, and searching wardrobe items and generating compatible outfits from clothing the user owns.
- Independently managing the database design, recommendation logic, interface development, hardware configuration, and system integration.

Shift Voice Assistant - Internal Hackathon Winner

- Won Shift's internal hackathon by developing a voice-command assistant for controlling browser functions through spoken instructions.
- Integrated the Deepgram API for speech-to-text processing and supported both button activation and wake phrases such as "Hey Shift" and "Shift."
- Designed command recognition to accommodate different accents and variations in speech.
- Built and demonstrated a working prototype within the hackathon deadline.

Fintech Daily Brief | Live Application

- Built a full-stack Next.js application that converts fintech news items into structured daily briefs covering markets, regulation, payments, cryptocurrency, and fraud.
- Developed a modular content pipeline that classifies articles using keyword rules and supports summarization through the OpenAI API.
- Created scheduled GitHub Actions workflows that generate and store daily briefs, commit the resulting JSON data, and trigger automatic Vercel deployments.
- Implemented schema validation, dated archives, source attribution, and separate API routes for generating and retrieving briefs.

AI Coding Agent Familiarity Analysis - Research Project

- Analyzed 33,596 AI-generated pull requests from 2,807 GitHub repositories to examine whether repeated exposure and prior merge success affected future acceptance and human-review burden.
- Developed and debugged Python analysis scripts, corrected preprocessing issues, and implemented sensitivity analysis across multiple minimum-activity thresholds.
- Helped evaluate logistic regression models controlling for agent identity and task type; the analysis found that prior success was associated with approximately four times greater odds of a subsequent merge.
- Communicated the study's methods, limitations, ethical considerations, and findings through statistical visualizations and a formal research report.

WORK EXPERIENCE

Redbrick – Software Developer in Test

September 2025 - April 2026

- Execute manual and automated functional, regression, and cross-browser tests to ensure product quality and reliability.
- Develop and maintain automated test suites using Playwright and C# to validate core user flows and prevent regressions.
- Document and track defects in Jira with clear reproduction steps, supporting evidence, and severity assessments.
- Collaborate with developers and product teams to reproduce issues, investigate failures, verify fixes, and improve test coverage.

CARSA, UVic – Group Fitness Instructor

September 2022 - Present

- Created engaging and dynamic classes that consistently received positive feedback from participants.
- Developed workout routines tailored to participants' fitness levels and goals.
- Fostered a supportive and inclusive class environment, ensuring participants felt motivated and safe during each session.

Village by the Station – Recreational Therapist

May 2021 - September 2022

- Developed and led recreational programs tailored to residents' interests and needs.
- Organized and facilitated group activities, outings, and individualized therapy sessions.
- Assessed residents' progress and adjusted therapy plan accordingly.

LEADERSHIP AND COMMUNITY

- **WEST Business Team and Social Media:** Support business initiatives and manage social media content, increasing engagement by more than 300%.
- Active member of Women in Engineering and Computer Science (WECS), UVic Formula Racing, the Victoria technology community, and Island Women in Science and Technology (iWIST).
- Regularly participate in hackathons and build independent software and hardware projects to explore new technologies outside the classroom.