

Shana Kesia Nursoo

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Technical Skills

Languages: Python, C++, C, HTML, CSS, JavaScript, Matlab

Frameworks/Libraries: React, Node.js, TensorFlow, NumPy, Pandas, PyTorch, Matplotlib

Tools/Databases: AWS, PostgreSQL, PostGIS, Git, GitHub, Visual Studio Code, Figma

Education

Simon Fraser University

September 2026 (expected)

Bachelor of Science

- **Relevant Coursework:** Data Structures/Algorithm, Distributed Computing, Relational Databases, Machine Learning, Client-side Web Development, Server-side Web Development, Discrete Mathematics, Spatial Analysis

Experience

Stem Fellowship – Big Data Challenge

September 2019 - November 2023

Head Organizer

- Organized the Big Data Challenge for Canada's largest STEM research competition with over **600,000+ participants**, achieving 53% representation from underrepresented genders and **112,800 participants** signups in 2023.
- Devised strategies with 8 other heads to educate participants about data science and computational thinking in STEM.
- Coordinated team meetings, mentoring and educative programs for analytics-related scholarly publications and manuscripts.

Projects

RED SEA 

March 2024

cmd-f 2024 hackathon: 2nd place winner

Flask, Python, AWS, Node.js, REST API, PostgreSQL, Mapbox API

- Developed a mobile application that predicts the safest evacuation routes for refugees using an AI algorithm, incorporating Mapbox API to visualize routes on an interactive map.
- Utilized **AWS Aurora** and **PostgreSQL** to **store, query** and **manipulate** 15,000 records of war zone casualties and geospatial data.
- Implemented Mapbox geocoding API to fetch and translate route trajectories into GIS coordinates for precise mapping.
- Utilized **Agile** software development process for app delivery and conducted **unit** and **database testing** using Postman.
- Collaborated with 3 other developers and secured **2nd place** in under 23 hours at Western Canada's **largest hackathon**.

URBANI 

March 2024

produHacks 2024 hackathon

LangChain, Flask, Python, Node.js, REST API, ReactJS, OpenAI API

- Developed a web platform that leverages AI to revitalize urban spaces impacted by historical conflicts and natural disasters, while seamlessly connecting businesses with leading urban planners.
- Utilized **OpenAI API** to integrate an AI language model that suggests best-fitting urban planners based on user's architectural and sustainability preferences.
- Developed a REST API with Flask and Node.js to seamlessly process incoming json POST requests and establish HTTP communication between the server and client.
- Integrated **CI/CD methodology** for automated software delivery, utilizing **Git version control** to manage team-based workflow.
- Recognized by **CEO of ViRA360** for most innovative tech of produHacks 2024, **best MVP** and likely to become a start-up.

ML Pro 

April 2024

personal project

C++, Object-Oriented Programming, Data Structures

- Designed and implemented a machine learning library in **C++**, providing a set of pre-built functions and tools for deploying machine learning applications and enhancing software development process.
- Implemented **class design** and robust **object-oriented programming** encapsulation, inheritance and polymorphism principles for enhanced modularity and code reusability.
- Utilized **data structures** such as smart pointers to optimize performance, efficiently managing memory allocation and deallocation.
- Employed **test-driven development** with Google Test to maintain robust code quality and streamline debugging.