Sina Haghighi

sina.liana.2001@gmail.com ∘ (778) 989-4409 ∘ Vancouver, BC ∘ sinahaghighi.ca

WORK EXPERIENCE

Amazon **May. 2023 – Aug. 2023**
Software Development Engineer Intern Vancouver, BC

- Led development of a stakeholder feedback website within the Intern tech team, leveraging AWS Lambda, DynamoDB and API Gateway deployed through a CDK for robust architecture
- Crafted an intuitive user interface with secure authentication, driven by iterative improvements based on stakeholder feedback
- Developed proficiency in React and TypeScript, swiftly applying new skills to the project, while gaining expertise in AWS services and integration strategies through self-directed learning.
- Conducted comprehensive code reviews and adeptly resolved technical challenges, maintaining transparent communication

Ballard Power Systems **Jan. 2021 – Aug. 2021**
Research Engineering Co-op and extended Software Development Contract Burnaby, BC

- Led the creation of a comprehensive testing results database application for the Research Team, streamlining data aggregation from diverse tests.
- Developed a centralized web platform using Flask and REST APIs to connect business logic and the database, while adhering to object-oriented design principles.
- Tracked progress using GIT, providing regular updates, and introduced an innovative method for leveraging historical test data to optimize testing efficiency.
- Self-taught Python, Flask, Jinja, and SQL to proficiently work with the relational database architecture.

PROJECTS

Binary Neural Network on FPGA **Feb. 2023 – Apr. 2023**

- Played a pivotal role as a contributor and team coordinator in the culminating group project for the SFU Digital Systems Design course (ENSC 350), achieving a remarkable 120% project grade and securing the top position in the class.
- Developed a Python script to train a binary neural network for digit classification (0-9) using the MNIST dataset, gaining insights into model layers like dense, batch normalization, reLU, and softmax.
- Engineered a robust system that stores model weights in ROM, translating the fitting process to VHDL for display of characterized output, following rigorous testing.
- Concluded with a strong prototype, ready for optimization by streamlining the process into a more efficient data and control path.

Spot-A-Bone – Spotify Player **Oct. 2022 – Dec. 2022**

- Implemented an enclosed embedded system with the Beagle Bone Green as the MCU, using cross-compilation with a Debian operating system machine.
- Solely worked on backend to control playback and selection, user authentication and facial recognition written in Python with Spotify API integration and an Azure database to store NFC key and Spotify authentication data
- NFC communication to choose songs/playlists, face recognition for account log-in, motion sensing for playback control, and Spotify API usage implemented in C and Python
- Utilized agile software development methodology to keep knowledge of the scope and timeline of the project throughout.

Undergraduate Big Data Challenge -- Finalist **May 2021 – Jul. 2021**

- Engaged in evaluating the propagation of misinformation concerning infodemiology on social media and formulating a remedy.
- Our approach employed natural language processing and sentiment analysis to gauge the impact of preventive measures on curbing the dissemination of misinformation related to the COVID-19 vaccine.
- Utilized Python to interpret the results and crafted a manuscript that advanced to the finals.

EDUCATION

Simon Fraser University **Sep. 2019 - Present**
B.A.Sc. in Engineering Science, Computer Engineering. Minor in Computing Science *Burnaby, BC*

- Deans Honour Roll 2nd & 3rd year; 3.5/4.33 GPA
- Data Structures and Algorithms, Artificial Intelligence, Database Systems, Operating Systems

SKILLS & INTERESTS

- **Skills:**
  - **Software** Java, Python, C/C++, TypeScript, SQL, VHDL, MacOS, and Linux
  - **Soft** – Adaptable, Trilingual (English, French and Persian), Time Management, Cooperative, Independent, Curious
- **Interests:** Cooking -- Casted for Chopped Canada | Soccer -- Volunteer as Coach at Coquitlam Soccer Club