Sina Haghighi
Computer Engineering Student

Third year Computer Engineering student passionate about software and data science. Interested in exploring technologies and methodologies to solve real-world challenges.

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WORK EXPERIENCE

Software Developer
Ballard Power Systems

08/2021 - 01/2022   *Burnaby, BC*
Achievements/Tasks

- Designed the Research Team's internal results database application to collect, store, and aggregate data from tests
- Continued development on desktop application using Python and PyQt to handle GUI elements, and SQLAlchemy ORM
- Created web version using Flask framework and implemented API to connect with relational database
- Practiced an MVC design for the application and employed object-oriented design principles throughout development
- Tracked and saved progress using GIT and performed weekly progress updates

Research Engineer Co-op
Ballard Power Systems

01/2021 - 08/2021   *Burnaby, BC*
Achievements/Tasks

- Designed and conducted detailed experimental and characterization tests to collect catalyst performance data and assist in research work on cathode catalyst of STC fuel cells
- Presented monthly findings and provided performance comparisons to suggest further testing on strong materials
- Implemented my innovation suggestion to utilize historical test data by correlating catalyst characteristics to reduce testing time
- Developed desktop application to store, aggregate, and process test results which centralized all research activity
- Researched and utilized Tkinter and PyQt for GUI elements, and learned SQL to work with relational database

ORGANIZATIONS

Team Guardian - SFU (11/2019 - 11/2021)
Team Captain and Operations Manager

EDUCATION

Computer Engineering Honours
Simon Fraser University

09/2019 - Present   *Burnaby, BC*
Deans Honour Roll 1/2/3 Year, ESSS, 3.53 GPA

- Data Structures & Algorithms
- Database Systems

SKILLS

Software
Python, C++, Java, SQL, Azure Database, MATLAB, HTML

Hardware
Soldering THT and SMD, Lab Equipment, Microcontrollers

Soft Skills
Trilingual (English, French, and Farsi), Time Management, Cooperative, Independent

COMPETITIONS AND PROJECTS

Titanic Project (02/2022 - 04/2022)
- Socio-economically classified the survivors of the Titanic by preprocessing training dataset and performed feature engineering to prepare for machine learning models
- Supplied preprocessed data to Perceptron, Random Forest, SVM and logistic regression model implementation of scikit-learn
- Visualized data using matplotlib and seaborn to present our approximation at an accuracy of 87% on test data

Personal Portfolio (11/2021 - 01/2022)
- Created a portfolio website for all my personal projects
- sinah.herokuapp.com

Coffee Me - Hack the North (09/2021 - 09/2021)
- Created a decision tree to suggest which coffee to drink depending on the mood and preference of the user
- Suggestion considered the roast, origin, and configurations to make to the drink to satisfy their cravings
- Dashboard developed using HTML and CSS Jinja2 template with Python

Undergraduate Big Data Challenge - Finalist (05/2021 - 07/2021)
- Participated in assessing misinformation spread about infodemiology and to devise a solution
- Our solution analysed the effectiveness on preventative measures on the spread of misinformation regarding COVID-19 vaccines
- Characterised our findings using Python and created a manuscript that reached final

Deloitte ThinkTech Case Competition - Finalist (10/2020 - 11/2020)
- Led a team of students from diverse backgrounds to develop an Open Banking solution for HSBC
- Designed an open banking interface where clients can view and manage all their financial information in a simple dashboard
- Modelled a business strategy to capitalise on the technology by implementing it within the HSBC online ecosystem and attracting a broader range of clients

INTERESTS

Cooking
Casted to appear on Chopped Canada Teens

Soccer
Coach and Volunteer at Coquitlam Metro Ford Soccer Club