# Shahera Islam

Email: shahera.islam@alumni.ubc.ca | Phone: +12508992963 | Linkedin | Portfolio | Github

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## EDUCATION

**University of British Columbia** *3333 University Way, Kelowna, BC V1V 3A4*          Sep 2016 – Apr 2022
*Bachelor of Applied Science - Electrical Engineering*
Relevant Honors: *Karen McKellen International Leader of Tomorrow Awardee*

## SKILLS:

- Programming Languages: Python, C/C++, SQL, MATLAB, R
- Data Analysis and Machine Learning: Pandas, Numpy, Scikit-Learn, TensorFlow
- Version Control: Git, SVN
- Software and Tools: Github, SOLIDWorks, Adobe Illustrator, PostgreSQL, Jupyter Notebook
- Documentation: Doxygen, Oxygen
- Web Development: HTML/CSS, JavaScript

## WORK EXPERIENCE

**Blackberry QNX,** *Burnaby, BC*          Jun 2022 – Present
*Technical Writer*

- Oversee comprehensive documentation for QNX Multimedia, Sensor Framework, and Audio applications, ensuring clarity, accuracy, and up-to-date content.
- Develop and manage the deprecation and discontinuation list for QNX Software Development Platform (SDP) 8.0, coordinating with sector managers to ensure the latest platform edition is current and complete.
- Create and refine visual content using Adobe Illustrator, enhancing the readability and professional quality of technical documents.
- Collaborate with software developers to reformat C header files and generate documentation using Doxygen, GitBash, and VS Code.
- Resolve JIRA issues for assigned sections of the SDP, effectively managing multiple projects.
- Contributed to key releases such as the QNX Graphics for Safety User's Guide, QNX SDP 8.0 Discontinuation Notice, QNX Sound User's Guide, QNX SDP 7.1, QNX SDP 8.0, and QNX Audio Developer's Guide.

**Blackberry QNX,** *Burnaby, BC*          Sep 2021 – May 2022
*Technical Writer Student*

- Conducted thorough research from source code, design documents, and standards to produce efficient and accurate documentation.
- Resolved JIRA issues for assigned sections of the QNX SDP, effectively managing multiple projects.
- Completed training in C programming, QNX real-time operating systems, and advanced technical writing.

**Greenlight Innovation Ltd,** *Burnaby, BC*          Jan 2021 – Sep 2021
*Software Engineering Co-op* (*Co-operative Placement II-III*)

- Developed and configured software packages using SCADA software (Emerald) for fuel cell test stations.
- Created and optimized graphical interfaces to accurately represent product systems.
- Ensured reliability by verifying and troubleshooting automated configurations against manual setups.
- Supported System Integration and Test Department in resolving technical issues and improving processes.
- Updated and refined software documentation, including procedures and UML drawings, to ensure accuracy and clarity.

**School of Engineering, UBC** *Kelowna, BC*          May 2020 – Aug 2020
*Research Assistant for Drinking Water Treatment* (*Co-operative Placement I*)

- Enhanced a machine learning application to accurately predict disinfection by-products in drinking water.
- Conducted in-depth research and comparative analysis of algorithms (PLS-DA, K-nearest neighbor, regression, CNN), identifying CNN as the superior model.

- Boosted model accuracy through innovative data augmentation techniques, significantly improving prediction reliability.
- Increased model interpretability by visualizing neural network activation layers, providing clearer insights into learned features.

## TECHNICAL PROJECTS

### Github Portfolio                                                                                                                 May 2024 – Jun 2024

- Created a Portfolio using Github.io by forking another portfolio and transforming the original files which were written in HTML, CSS and Javascript.
- Introduced new interactive elements and updated the visual design to reflect a more modern and polished look, ensuring consistency and readability across different devices.

### Sephora Ingredient Checker                                                                                         Apr 2024 – May 2024

- Created a web-based tool using Python and Pandas in Jupyter Notebook to analyze beauty and skincare products from Sephora for potential allergens.
- Utilized Python libraries and Jupyter Notebook to process and analyze large datasets of product ingredients efficiently.
- Designed the tool to include product ingredient analysis, allergen identification, search and filter capabilities, and detailed product information.

### Microfluidic Chip for Blood Dialysis,  UBC *Kelowna, BC*                                  Oct 2019 – May 2020

- Partnered with a biomedical startup to develop a microfluidic chip for blood purification, addressing the shortage of kidney donors and limitations of current dialysis methods.
- Employed COMSOL Multiphysics for simulation and SolidWorks for 3D modeling to design a high-performance, cost-efficient dialysis device.
- Developed a piston pump system for controlled fluid flow, dual fluid operation for simultaneous processing, parallel micro channels for molecular transfer, efficient waste fluid disposal, and multi-stage purification for enhanced efficiency.
- Directed a team of five, organized meetings, and ensured project milestones were met.
- Served as the primary liaison between Okanyrm Ltd. and UBC faculty advisors to align project goals and specifications.

### Heart2Go - Mechanical Heart Valve, UBC *Kelowna, BC*                                  Sep 2019 – Dec 2019

- Under the guidance of renowned biomedical industry innovator Dr. Hadi Mohammadi, designed a mechanical heart valve aimed at replacing malfunctioning tricuspid valves in the human heart.
- Leveraged SolidWorks software extensively in the design process to engineer a valve capable of reducing blood backflow, increasing product lifespan, and potentially enhancing patient life expectancy.
- Designed the valve with a specific focus on performance improvement, ensuring it could effectively mitigate blood backflow and prolong product lifespan.
- Implemented a comprehensive risk assessment strategy throughout the development process to guarantee the quality and safety of the final product.

### Microcomputer Engineering Projects, UBC *Kelowna, BC*                                  Jan 2020 - Mar 2020

- Created various projects utilizing a TI ARM-Cortex Based Tiva Development Board in the CCS Cloud.
- Implemented projects using ARM Assembly Language, including proximity sensors, clocks, and more.
- Applied practical constraints on embedded systems to ensure error-free operation, addressing issues such as false outputs and timing I/O signal levels.

### Hovercraft Design Competition, UBC *Kelowna, BC*                                            Jan 2018 – Apr 2018

- Conceptualized and developed a remote-controlled hovercraft equipped with a sophisticated dropping mechanism, aimed at optimizing fertilizer distribution for Okanagan farmers
- Led the successful implementation and installation of intricate electrical components utilizing Arduino, C++, wiring techniques, remote control Bluetooth systems, and mechanical dropping mechanisms
- Recognized among the top 15 performers in the engineering class for outstanding efficiency demonstrated during rigorous testing phases.