Nicholas Earle

ncearle@gmail.com (506) 343-4209
ncearle.com Vancouver, BC

Personal Summary

Recent MASc graduate experienced in algorithm development, writing and debugging code in C++ and Python, integrating that code into larger projects with Git and Jenkins, deciphering and analyzing data to improve techniques, and communicating complex ideas to wide audiences. Seeking an engineering role to contribute to meaningful and impactful technology.

Education

MASc - Mechanical Engineering, University of British Columbia, Vancouver, BC (May 2021)

- Master's research focused on algorithm and code development for CFD applications and creating an anisotropic mesh generator using an advancing layer method.
- Thesis: *Anisotropic Advancing Layer Mesh Generation* (92%)
- NSERC CGS-M Research Scholarship (2019-2020)
- Mechanical Engineering – Department Scholar – Academic Merit (2019)

BSc - Mechanical Engineering, University of New Brunswick, Fredericton, NB (May 2018)

- Minors: Financial Mathematics, Business (Finance); Diploma in Technology, Management and Entrepreneurship
- First Class Honours (Dean's List; GPA: 3.9)
- Sir Edwin Jacob University Scholarship (2013-2018)
- UNB Alumni Merit Award (2016-2018)

Research Experience

Research Assistant, ANSLAB, The University of British Columbia, September 2018 – April 2021

- Developed a robust C++ application for building three-dimensional anisotropic meshes for use primarily in computational fluid dynamics simulations.
- Solved meshing bottlenecks and sped up CFD process by designing algorithms for common mesh generation issues such as complex corners, collisions, detection, and anisotropy.
- Wrote unit and regression tests in C++ and Python to continuously integrate my application into a larger meshing framework, GRUMMP, via Git and Jenkins.

Recent Employment Experience

Golf Services, Part-Time, Shaughnessy Golf & Country Club, March 2019 – Present

- Created a new database for relevant member data using VBA and Excel, allowing for quicker search and retrieval of necessary information, improving workflow and member experience.
- Organized and staged member equipment and assisted members as needed.

Mechanical Engineering Summer Student, CBCL Ltd., April 2017 – August 2017

- Collaborated with experienced professional engineers on building engineering and designing building information management systems and processes.
- Developed building and equipment models using AutoCAD, Revit, HAP, and RetScreen.

Relevant Skills

- **Proficient**: C++, Python, Git, Windows, Office, Paraview,
- **Competent**: MATLAB, Latex, Linux, Bash, SQL, VBA