Matthew Goodman

Vancouver BC, Canada
+1 (778) 322 1968, mpg3@sfu.ca
linked in, portfolio

Technical Skills:

Programming	:	Javascript, C++, Matlab, VHDL, CSS, HTML, C#, Python.
CAD	:	SolidWorks, PCB Design (EasyEDA).
Development	:	Git version control, Unity, VS Code.
Misc.	:	MS Office, Google Workspace, soldering, DMM, Oscilloscope.

Transferable Skills:

Creative and innovative problem solving.
Productive and balanced team player.

Projects and Experience:

Robot Soccer Team Member (link) *(Sep 2022-Present)*

Key member of the mechanics team of SFU Robot Soccer. It is a club, with the goal to compete in the 2024 robocup small size league in the Netherlands. My role within the teams is to:

> Designing physical parts using SolidWorks.
> Manufacturing parts with a variety of methods like laser cutting, 3D printing, CNC machining, and polyurethane casting.
> Working collaboratively with a subteam of 8 people, using git version control.

"Evolution" (link) *(Oct-Nov 2022)*

A self-driven independent project. A simulation made to demonstrate the effect of natural selection. Using Javascript, HTML, and CSS. My skills used in the project were:

> Designing a custom neural network, based around evolution by natural selection and mutation.
> Tuning properties to produce meaningful results.
> Creating unique systems that interact synergistically.

Digital Dice for ENSC 120 *(Oct-Nov 2022)*

ENSC 120: Introduction to Electronics Laboratory Instruments Operation...
A class project based around following a schematic. Displays patience, attention to detail, and thoroughness. The skills I used in the project were:

> Soldering of surface mount (down to 1206) electrical components.
> Performing fine detail work in an efficient and deliberate manner.

Automatic Window for ENSC 100W *(Sep-Nov 2022)*

ENSC 100W: Engineering, Science and Society
A 6 member design lab group. Our chosen project was to design a system to automatically open and close a window, based on inside temperature, and external weather data. Using Arduino/C language. My role within the team was:

> Networking a microcontroller to get data from the OpenWeather API.
> Interfacing with sensors and DC motor drivers.
> Collaborating effectively with other team members on dispersed tasks.

"Break it Down" (link) *(Aug 2022)*

A self-driven independent game development project, completed during a 2 day competition (WowieJam4). Gameplay design based on performance metrics. Using Unity, C#, Audacity, and Krita. My skills used in the project were:

> Completing a full product by a strict deadline.
> Self-managing a timeline of tasks and goals.
> Working in multiple disciplines: designing gameplay, composing sound effects, selecting music, designing user interface/experience, and drawing asset art.

Canadian Computing Competition *(Feb 2022)*

Ranked 124 out of 3981 in the 2022 Junior competition. Using Python. Challenges that I overcame during the competition:

> Quickly solving abstract tasks.
> Applying algorithmic optimisations.

"Ultimate X/Os" (link) *(Oct-Nov 2021)*

A self-driven independent project. A more complicated version of tic tac toe (as described on wikipedia), with online multiplayer. Using Javascript, HTML, CSS. The skills I used during the development were:

> Networking between clients and the server
> Implementing pre-defined rules by following a design document.
> Creating a robust system, with variable parameters like different board sizes.

Personal Development:

Interests	:	Game development, hiking, reading, skiing.
Education	:	BASc in Computer Engineering, at Simon Fraser University. Completed 63 of 120 units. CGPA: 3.73. (2022-present)
Awards	:	Spring 2023 Dean's Honour Roll. Spring, and Summer 2023 SFU Alumni Scholarships. Summer 2023 Undergraduate Open Scholarship.