# Matthew Goodman

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linked in, website


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## 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:

Problem solving.
Analytical thinking.
Creativity and Innovation.

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## Experience.....:

*>> Robot Soccer Team Member (Link)...(Sep 2022-Present):*

An SFU club, with the goal to compete in the 2024 robocup small size league.

- 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).....(Aug-Sep 2023):*

Self driven project. A simulation, to demonstrate the effect of natural selection. Using Javascript, HTML, CSS.

- 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.

*>> ENSC 120 Digital Dice.....(Oct-Nov 2022):*

ENSC 120: Introduction to Electronics Laboratory Instruments Operation...
Following a schematic to hand solder through hole and surface mount (1206) components.

- Soldering of surface mount electrical components.
- Performing fine detail work in an efficient and deliberate manner.

*>> ENSC 100W Automatic Window.....(Sep-Nov 2022):*

ENSC 100W: Engineering, Science and Society

A 6 member design lab group. A system to automatically open and close a window, based on inside temperature, and external weather data. Using Arduino/C language.

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

*>> "Break it Down" (Link).....(Aug 2022):*

Self driven solo game development project, completed during a 2 day competition (WowieJam4). Gameplay design based on performance metrics. Placed in the top 300 on most categories. Using Unity, and C#.

- 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 124/3981 in the 2022 Junior competition. Using Python.

- Quickly solving abstract tasks.
- Applying algorithmic optimisations.

*>> "Ultimate X/Os" (Link).....(Oct-Nov 2021):*

Self driven project. A more complicated version of tic tac toe (as described in wikipedia (link)), with online multiplayer. Using Javascript, HTML, CSS.

- Networking between clients and the server
- Implementing pre-defined rules.
- Realizing the creation of different board sizes.

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## Interests.....:

Game development, reading, hiking, skiing.

## Education.....:

In progress: BASc in Computer Engineering, at SFU (2022-present). GPA: 3.73.

## Awards.....:

Spring 2023 Dean's Honour Roll.
Spring and Summer 2023 SFU Alumni Scholarships.
Summer 2023 Undergraduate Open Scholarship.