Brian Fu

h44fu@uwaterloo.ca
https://github.com/pythebrian/
https://pythebrian.github.io/

Mechanical Engineering | University of Waterloo | 2A

Key Projects

Proto Runner (Java)

• Popular single- player game that simulates a virtual obstacle running experience using object oriented programming

Tic Tac Toe Simulator (C++)

• Simulated a one versus one game of tic tac toe

• Currently working on implementing a Minimax algorithmn to allow for single player mode

Banking Simulator (C++)

• Simulated the process of creating, modifying and closing an account

• Utilized object-oriented programming and fstream to maintain account storage after program termination

GPA Calculator (C++)

• Collect user inputs of invididual grades and weightings to compute student's GPA

Webscraping (Python)

• Webscraped TMX and NewEgg webpage to collect price data

• Set up an alert system to notify user when desired priced has been reach by email

Experience

Linamar (Spinic Manufacturing), Guelph - Ontario

Quality Assurance *(Jan. 2020 - Mar. 2020)*

• Composed detail component measurement using contour tracer and optical comparator

• Operated metallurgical lab to assess component hardness using Vicker and Rockwell hardness testing machines

• Evaluated quality of products through based on GD&T standards and machine reports

• Conducted accurate containmination testing to evalaute product cleaniness to meet customer standards

Waterloop, Waterloo - Ontario

• Visualized coiling mechanism using SolidWorks for an automatic coiling system

• Produced SolidWorks drawings to document designs

• Modified motor components to maximize the use of existing materials

• Designed coil winding mechanics to fit team requirements

Relevant Skills

• Conversant in C++ and Python

• Familiar with HTML, CSS and JavaScript

• Familiar with Object-oriented programming

• Excellent knowledge in SolidWorks and AutoCad

• Familar with Adobe Premiere Pro and Adobe PhotoShop

Interests

• Custom designed Star Wars lightsaber using SolidWorks

• 3D printing using custom designs made from SolidWorks

• Reasearching and assembling custom build computers

Education

University of Waterloo

Canadiate of Bachelor of Applied Science, Mechanical Engineering

Relevant Courses:

• Programming fundamentals (C++, MATLAB)

• Conceptual design, project planning

• Workshops in visual, written and oral communcation

• Material properties analysis

• Circuits analysis and breadboarding