

NIKITA AGGARWAL

nikita.aggarwal1@ucalgary.ca
(403) 827-2574

871 Carrington Blvd NW
Calgary, AB T3P 1L7

EDUCATION

University of Calgary: 2018 ~ Current

Bachelor of Science in **Mechanical Engineering** – Currently enrolled in 3rd year

2nd year **GPA** – 3.70/4.00

Relevant Coursework: Fluid Mechanics, Dynamics, Statics, Material Chemistry for Engineers, Thermodynamics, Deformations of Solids, Heat Transfer, Manufacturing & Production Processes.

SOFTWARE KNOWLEDGE:

Ansys Student, Processing (Similar to Java), Matlab, Wolfram Mathematica, SolidWorks (CAD), Microsoft Excel

CERTIFICATION:

Valid Class 5 Alberta License

PROJECTS

Steam Turbine Engine

- Made prototypes using SolidWorks and analyzed various turbine types to capture maximum wind through its scooped shape
- Based on the testing process of each prototype, 3-D printed the turbine buckets to minimize heat loss when converting mechanical energy to electrical
- Decided on the best turbine model regarding the size of each bucket, the number of buckets and ideal rotating shaft speed, in order to convert max amount of mechanical energy to useful voltage
- Using thermodynamic laws, worked together in a team to perform calculations for the turbine to meet specific voltage and rotational turbine speed, under the budget and time frame

NeuroNexus (Hackathon)

- Created a Real - time visualization of large - scale dynamic functional brain networks from electroencephalogram (EEG) recordings
- Responsible for creating a one minute picture video presentation, planning a demo date, generating social media pages to promote awareness
- Wrote multiple progress reports consisting of problem identification, project's evaluation criteria, prototyping evaluation, degree of real time data transferability
- Learned how to operate the electroencephalogram (EEG) machine

Digital Dashboard

- Created an algorithm to follow a systematic process in order to implement a code with needed error statements and user input
- Implemented code for a car and truck's gauge, location data, sensor data, fuel tank consumption, mileage and speed, using Processing
- Arranged meetings with my partner to review each other's work and inform each other on our progress

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- Along with my team-mate, prepared the presentation of the code and an alternative solution set using Matlab

Sensory Robot

- Defined a design problem statement and gathered relevant background information
- Worked in a team environment to brainstorm as to which sensory devices to use, in order for the robot to complete the required tasks in the least amount of time
- Using SolidWorks, constructed two prototypes
- Implemented the code for which the sensory motor functions with a partner, using Processing
- Responsible for testing each prototype with a variation of sensory devices, using an unbiased scoring- grid method and communication of the test results
- Performed work and energy calculations for when testing the prototypes if it would be capable of lifting the object (a required project task)

Calgary Hacks (Hackathon)

- Created a Calgary themed game, using Processing, which consists of multiple mini games
- Responsible for constructing an effective user interface
- In charge of coordinating a final presentation and answering questions in relation to the implemented game

EMPLOYMENT EXPERIENCE

Cashier and Server - Pizza Hut

May 2019 - August 2019 (Seasonal)

- Responsible for attending customers in person and through phone calls, dealing with cash, taking orders, preparing pizza, bread- sticks and fries, re-stocking the topping containers, packing orders
- Worked under a time constrain when dealing with multiple tasks during busy work days

Cashier and Merchandiser - Dollarama

July - August 2017; July - August 2018 (Seasonal)

- In charge of attending customers, dealing with cash, re-stocking and organizing products, daily inventory
- Performed efficiently when completing multiple tasks at once such as quickly processing payments and communicating with customers

SCHOLARSHIPS & AWARDS

Jason Lang Scholarship

2019-2020

DNOW Canada ULC Award in Mechanical Engineering

2019

Debrees' Scholarship Award for Women in Engineering and Science

2018

University of Calgary Entrance Engineering Scholarship Award

2018

Alexander Rutherford Scholarship

2018

PERSONAL INTERESTS

Hiking, Biking, Badminton, Volleyball, Working out