

# Sunny Nagam

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🔗 [github.com/SunnyNagam](https://github.com/SunnyNagam)

## SKILLS

- Python
- Keras/Tensorflow
- HTML5/CSS/JavaScript
- Java
- Unity3D
- C++
- GitHub
- REST APIs
- MySQL

## EDUCATION

### UNIVERSITY OF CALGARY

B.Sc. in Software Engineering

Expected Graduation Date: 2020

GPA: 3.3

## EXPERIENCE

### HOTCHKISS BRAIN INSTITUTE

Machine Learning Engineer Intern

May 2018 – August 2018

- Used Python and Tensorflow to build neural network architectures including Convolutional Residual and Generative Adversarial Networks to detect multiple sclerosis in MRI scans of the brain.
- Worked with a team of other developers to efficiently develop and test image processing software.

### COMPUTER SCIENCE CLUB

Co-Founder and Co-Manager

Sept 2015 – June 2016

- Utilized leadership and team working skills to assist in development of computer games and building of arcade machine
- Taught and instructed club members during lunch hours to program in Java
- Supervised and helped organize club schedule and planned events

## PROJECTS

### GRAVITY DASH

Unity/C# Mobile Game

- **Unity** and **C#** based game developed for iOS and Android.
- User interface and Physics engine developed and written in **C#**

### 3D POOL

Java Based 3D Desktop Game

- **Java** based language “processing” creates a 3D playable pool game with camera control and 3D modelling created with linear algebra.
- Utilized vector based linear algebra to create physics engine and collision system.
- Imported visual and audio assets into game using **minim** library.

### HANGOUTS DATA ANALYZER

Python Data Miner Script and Visualizer

- **Python** parses JSON data downloaded from Google Hangouts message archives.
- Graphs to visualize individual participation and message frequency using **Plot.ly**.

### NEURAL DIGIT READER

Java Based Machine Learning Program

- **Java** program utilizes machine learning formulas to recognize handwritten numbers.
- Uses Convolutional Neural Networks to recognize writing drawn on custom built GUI.

### JOKE TWEET BOT

Twitter/Reddit API Based Web Bot

- **Python** script which integrates Twitter and Reddit REST API to mine for jokes and repost on Twitter.
- Uses **OAuth 2.0** authorization framework.

### ARRAY VISUALIZER

Java Visualization Application

- **Java** visualizes popular sorting algorithms in a colorful simulation for educational purposes.
- Utilizes multi-threading to allow more advanced GUI input and user control.

Additional projects can be found at: [github.com/SunnyNagam](https://github.com/SunnyNagam)

## AWARDS

- 1st place in Synopsys Calgary Collegiate Programming Contest
- 2nd place in University of Calgary's Competitive Programming club leaderboard
- Western Canada High School Student in Technology Award
- 2nd place in Alberta for Waterloo's Canada Computing Completion
- Keith Yu Memorial Scholarship for Computer Studies