SAUHARD PANT

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EDUCATION

UNIVERSITY OF WATERLOO
B.ASc. Computer Engineering 2021

SKILLS

LANGUAGES

Java
Javascript
Python
C++
C#

FRAMEWORKS

Android
NodeJS
ReactJS
Bootstrap
Semantic UI

TECHNOLOGIES

Git / SVN
MongoDB
IntelliJ / Eclipse
XCode
Visual Studio
Heroku / AWS
Postman

OPERATING SYSTEMS

OSX / MacOS
Linux (Ubuntu)
Windows

INTERESTS

Laptop Stickers
Automation
Guitar
Jogging

SELECTED PROJECTS

AI SELF DRIVING VIRTUAL CAR | (Python, Pytorch)

- Constructed a deep learning neural net that analyzes the car's input signal at any given state to choose the appropriate response.
- Implemented the Softmax function as an action selection policy allowing the AI to explore the environment while still being able to complete its task efficiently.
- Set up a memory replay method to back propagate the loss of batches of sample states instead of every single state so that the AI would be less biased.

EAT OUT | (HTML, CSS, JavaScript, Node.js, MongoDB, Express, Java, API)

- Developed the back-end using NodeJS and Express, while using MongoDB and Mongoose to store user sign-up information and any restaurant that they add to their list.
- Used multiple node packages such as passport, passport-mongoose and passport-local to set up an OAuth system allowing new users to sign-up and returning users to login.
- Parsed the incoming data from the zomato API and made use of the jQuery library to display in a User Centric Manner.
- Currently working on the accompanying android app created using Java and Android Studio.

THE LOCKED ROOM | (Unreal Engine 4, C++)

- Used the Unreal Engine platform to render a 3D escape room with multiple objects and gave each object certain characteristics to make the gaming experience feel more realistic.
- Set up trigger volumes in the game that could detect things entering and leaving a certain space and when activated would cause change in the game environment such as opening locked doors.
- Implemented collision volumes to let the physics engine know what happens when objects collide in the game, essentially fixing the bug which allowed players to pass through closed doors.

EASY ORDER | (Java, Android Studio)

- Built a mobile application in Android Studio that makes use of Design Patterns and User Centric Design.
- Made use of implicit intents to outsource the task of sending out orders via Gmail.

AWARDS

Governor General's Academic Medal 2016

- An award recognizing the student with the highest post secondary average upon graduation.

President's Scholarship of Distinction 2016

- Awarded to students applying to the University of Waterloo with an average of 95% or higher.

RELEVANT EXPERIENCE

University of Waterloo Alternative Fuels Team 11/2016 - 03/2017

- Pursued interests in controls and modelling by joining the UW Alternative Fuels Team as a Volunteer Member, responsibilities include ADAS and automotive quality and safety testing with MATLAB test case generation.

Academic Representative, ECE Class of 2021 09/2016 - 12/2016

- Elected as the academic representative to put forth student's views and concerns regarding the class and come up with possible solutions to the problems faced by students by brainstorming alongside the professors and academic advisors.