# VISHNU GOVINDARAJ

#### Education -

**Udacity** – Self-Driving Car Engineer Nanodegree **University of Calgary** – Computer Science, B.S.

#### Technical Skills (\*indicates advanced proficiency)

Programming Languages: Java\*, C#, ASP.Net, Python, C++, C, JS/HTML/CSS, MySQL, VBA

Frameworks/Libraries: Tensorflow, Keras, Spring, JQuery\*, JUnit\*, Log4J, OpenCV

Tools: AWS, Docker, Jira, Jenkins, Linux, Jupyter Notebook, GitHub\*, SVN, Eclipse\*, Visual Studio

#### Projects -

## Traffic Sign Classifier – (GitHub)

- Created a model using a Convolutional Neural Network to classify German traffic signs (MNIST).
- Model was trained on 38000 images. Images were transformed to grayscale and normalized. Validation Accuracy was 97%. Test accuracy was 95%. LeNet5 architecture was used with dropout.

## Finding Lane Lines on the Road – (GitHub)

- Developed software to identify lane lines when driving on the road using Python and OpenCV
- Successfully identified the lines in a video using Canny Edge Detection and Hough Space Transform algorithms. Lane lines were extrapolated into solid lines and drawn back into the video stream

### 2D Game - Grade Point - (GitHub)

- Designed a retro-style game using Java, Tiled and GIMP that reflected my university experience
- Delivered a bug-free game that had many modes: Platformer, Overhead and Obstacle-dodge

# Work Experience

# University of Calgary – Research Assistant

Successfully Implemented and researched techniques to retrieve and analyze user reviews from Ecommerce site Amazon.com. Searched for and identified potential fraudulent reviewers.

- Delivered effective software solutions to achieve project goal: Identify fraudulent reviewers
- Ran a Web crawler that consistently gathered over 40 GB of useful online data
- Developed a parser that extracted ~10 review related information from thousands of web pages

Jacobs Canada Inc – Instrumentation Engineering Intern Fort McMurray, AB | May - August (2011) Assisted CMT in inspecting various areas of a SAG-D oil site during pre-commissioning. Followed up on completed work to verify plant was being built to specification.

- Developed software that logged activities of a team of 10 and generated reports for Dept. leads
- Participated in approx. 40 Walk-downs to verify proper installation of instruments on site
- Assisted in the closing of over 100 Punch-tickets by performing due diligence on completed work
- Assisted in the inter-departmental distribution, tracking and follow up of open Punch-tickets

# Jacobs Canada Inc – *Mechanical Engineering Summer Student* Calgary, AB | *May - August (2008)* Supported a team of Mechanical Engineers in the process of designing high-pressure tanks

- Revised changing information from over 50 instrumentation diagrams into excel
- Archived and updated over 100 engineering documents using a proprietary database

In Progress Calgary, AB | January 2016

June 2018

January 2015 – April 2015

Calgary, AB | March - June (2015)

July 2018