## Rahul SHIV CHAND

## ABOUT ME

ADDRESS: VYAS 182, BITS Pilani, Rajasthan - 333031

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INTERESTS: Computer Vision, Multi-robot interaction, Reinforcement Learning

## **EDUCATION**

Current BE. (Hons.) in Computer Science and Engineering

Aug '15 - Jul '19 (Exp.) Birla Institute of Technology and Science, Pilani, Pilani, India

CGPA **9.732/10** (Semester V)

## **SKILLS**

## **Programming Languages**

• R • C • C++ • Verilog • Python (openCV, tensorflow, numpy)

• Prolog • Scheme • Java

## **WORK EXPERIENCE**

Aug - Dec '17 Teaching Assistant for the course Logic in Computer Science under Prof. Shan Balasub-

Responsible for conducting tutorial sections for students and creating tutorial sheets and exercises.

MAY - JUL '17 | Summer Research Intern at INDIAN INSTITUTE OF REMOTE SENSING (IIRS), Dehradun, India

The project involved two tasks 1) Development of an ensemble model for Road-Asset managment (Image-segmentation) using DeepConv networks (FCN and Faster-RCNN). 2) Implementation of a fully automatic vehicular tracking program using CNN and Haar-like features.

## University Coursework

**Computer Science** 

**Discrete Structures** 

Logic

Theory of Computation Operating Systems

Data Structures and Algorithms

Database Systems

**Computer Programming** 

Principle of Programming languages Object Oriented Programming

Machine Learning

Data Mining

**Mathematics** 

Multi-Variate Calculus Linear Algebra and Complex Analysis

Probability and Statistics
Differential Equations

Sciences

Mechanics and Oscillations Principles of Economics Thermodynamics General Chemistry General Biology

## Online Coursework

COMPLETED

CS231n: Convolutional Neural Networks for Visual Recognition

Reinforcement Learning

ONGOING

Theories of Deep Learning (STATS 385)

Fei-Fei Li, Stanford University

David Silver, University College London

Stanford University

## **PROJECTS**

#### MAY - JUL '17

# Proposed and developed an ensemble DeepConv model for Road-Asset Mapping Internship Project, Indian Institute of Remote Sensing (IIRS), ISRO, Dehradun, India

The project involved developing a program for road-asset mapping and vehicular tracking which can be used for traffic surveillance using cameras mounted by IIRS around Dehradun. The program used an ensemble of fully convulational networks and Faster-RCNN trained on data obtained from IIRS cameras and ImageNet. (Journal Report submitted to IIRS)

#### Oct - Nov '17

Q-learning model for Atari Games.

Course Project (Machine Learning), BITS Pilani, India

The project was aimed at implementing a Q-learning model capable of human level performance on classic Atari Games like Pong and Breakout. The project was implemented on Open-AI gym and performed at par with best human players. (Report)

#### **SEPT - DE '16**

Classification of Twitter users into Bots and Humans.

Course Project (Machine Learning), BITS Pilani, India

The project focused on implementing a Machine learning model to classify Twitter users. An ensemble of different classifiers was used on the cresci-2017 dataset to obtain an accuracy of 86.47.(Report)

## AUG - DEC '17

Path planning in unexplored terrain

Study Project (Dr. Avinash Gautam), BITS Pilani, India

The project involved a thorough literature Review of existing algorithms for coverage and search in unexplored terrain and implementation and optimization of the existing algorithms on stage-ROS.

#### **AUG - CURRENT**

Anomaly Detection in Surveillance Videos

Informal Project (Dr. Navneet Goyal), BITS Pilani, India

Part of the team working under Prof Navneet Goyal aiming to develop a model to detect suspicious activity from surveillance videos. The model will be tested on the McGill University Dominant and Rare Event Detection Data set.(End term presentation)