SAI BHARGAVA RAMU

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EDUCATION

Dual Degree	Engineering Design, Indian Institute of Technology Madras	7.32/10	2018
Class XII	Sri Chaitanya Junior Kalasala, Vijayawada	97.3%	2013
Class X	Dr. KKR Gowtham International School, Visakhapatnam	94.3%	2011

PROFESSIONAL EXPERIENCE

Software Development Intern
Altair Engineering India, Bangalore *December-May 2017*

- Developed a utility **(PackNGo)** for packing as well as unpacking of Project files.
- Developed a utility to **heal file paths** by linking missing paths in a Project. It is helpful when Project files are moved from one location to another location

Project Trainee
Caterpillar Engineering Design Center, Chennai *May-July 2016*

- Worked with Virtual Product Development Engineers on Pre and Post processing tasks in Abaqus
- Developed **6 automation scripts** in Abaqus-python which increased sectional **efficiency by 3%**

PROJECTS

Deep Learning to Clone Driving Behavior Deep Learning, Keras, CNNs
Self-Driving Car Nanodegree Program, Udacity *March-July 2017*

- Built & trained a convolutional neural network for end-to-end driving in a simulator, using **TensorFlow** and Keras
- Used optimization techniques such as regularization and dropout to generalize the **network for driving** on multiple tracks

Vehicle Detection and Tracking Computer Vision, OpenCV, Machine Learning, SVMs
Self-Driving Car Nanodegree Program, Udacity *March-July 2017*

- Created a vehicle detection and tracking pipeline with OpenCV, histogram of oriented gradients (HOG), and support vector machines (SVM)
- Optimized and evaluated the model on video data taken during **highway driving** from an automotive camera

Advanced Lane Finding Computer Vision, OpenCV
Self-Driving Car Nanodegree Program, Udacity *March-July 2017*

- Built an advanced lane-finding algorithm using distortion correction, image rectification, colour transforms, and gradient thresholding.
- Identified lane curvature and vehicle displacement from center of the lane, **overcame environmental challenges** such as shadows and pavement changes

Deep Learning for Geometry
Dual Degree Project *June 2017-Present*

- Develop Deep Learning models for classification, segmentation and retrieval of 3D models by training on limited datasets
- Achieved **84%** base accuracy without fine tuning using **3D CNNs** on converting data into voxelized format. Developing algorithms using **kd trees** to handle point cloud data for order invariance.

PROGRAMMING SKILLS

Scripting Languages	Python, R, Bash(Basic)	**Programming Languages**	C++,C
Software as Tool	Mathematica, MATLAB/Octave,LaTeX	**Operating System**	Ubuntu, Windows
Internet Technologies	HTML, CSS, Javascript (Basic)	**Design Software**	Autodesk Inventor

POSITION OF RESPONSIBILITY

Teaching Assistant August 2017 - Present
Introduction to Computation and Visualization

- Providing academic guidance to a batch of 55 students along with team of 9 people

Open Quiz Event Coordinator, Mechanica January-March 2015
Department Fest of Mechanical Engineering & Engineering Design

- Coordinated to ensure smooth running of the event which received 100+ students participation

OTHERS

- Stood **30/1077** in OLX challenge hosted on Hackerrank 2017
- In national **top 0.1%** of students in JEE Mains out of more than 1 million students 2013
- In state **top 1%** of students in the National Standard Examination in Chemistry(NSEC) 2013
- Selected for **KVPY**, program by Department of Science and Technology, Government of India 2013