

VIJAYPRASAD.S



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Vijayprasad S



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Skills

PROGRAMMING LANGUAGES

C++/C | Python | Bash | Matlab | C#

MACHINE LEARNING PACKAGES

Tensorflow | Keras | Theano | PyTorch

CONTROLLER BOARD

NVIDIA Jetson | Arduino | Raspberry-Pi

DISTRIBUTED COMPUTING

AWS | Hadoop | HIVE

Relevant Coursework

Data Structures & Algorithms

Computer Organization

Operating Systems

Database & Management Systems

Software Engineering

Computer Architecture

Fuzzy Systems & Genetic Algorithms

Microprocessors & Microcontrollers

Responsibility



FESTEMBER, NIT TRICHY

Annual Inter-Collegiate Cultural Festival

Posn: ORGANIZER

Dur: 2017 - 2019

festember

Managed a diverse team of 60 undergraduate students towards the planning and execution of a cluster of workshops for the cultural festival.



TEXAS INSTRUMENTS

SCR Research and Development team.

Posn: Co-SUPERVISOR

Dur: 2018 - 2019

Managed a team of junior interns researching under SCRs subjected to ESD conditions at the Indian Institute of Sciences (IISc) Bangalore.



NATIONAL SERVICE SCHEME

Indian public service program

Posn: ORGANIZER

Dur: 2017 - 2019

Organized various social and education campaigns and developed a sense of social and civic responsibility among the students by covering several aspects like the adoption of villages & urban slums for development and setting up medical centers, programs of mass immunization, sanitation drives, etc

Social Participation



AMERICAN CANCER SOCIETY

Donated the overall personal savings gained through the means of combined prize money from participation in various quizzes from secondary education till the sophomore year to the American Cancer Society (ACS).

Education

- 2016-2020 NATIONAL INSTITUTE OF TECHNOLOGY, TIRUCHIRAPPALLI, INDIA
Bachelor of Technology (B.Tech) | Expected May 2020
Major: Electrical and Electronics Engineering | CGPA: 8.39
Minor: Computer Science and Engineering
- 2014-2016 THE INDIAN SCHOOL, BAHRAIN
Central Board of Secondary Education | Percentage: 94.6% (473/500)

Professional Experience



INDIAN INSTITUTE OF SCIENCE (IISc) BANGALORE

Ref: Dr. Suresh Sundaram, *Associate Professor, Dept of Aerospace Engineering*

Lab: ARTIFICIAL INTELLIGENCE AND ROBOTICS LABORATORY

Dur: May 2019 — Jul 2019

Posn: Research Intern

Implemented CUDA optimization techniques for efficient motion estimation on the NVIDIA Tesla GPU cluster. Moreover, developed a deep learning architecture for depth prediction using data from a monocular camera and principle of transferred learning. Further, extrapolated this into devising an obstacle avoidance and path planning algorithm on quad-copters.



INDIAN INSTITUTE OF TECHNOLOGY (IIT) DELHI

Ref: Dr. Sunil Jha, *Professor, Dept of Mechanical Engineering*

Lab: AUTONOMOUS ROBOTICS LABORATORY

Dur: May 2018 — Jul 2018

Posn: Research Intern

Developed an embedded vision system for self-driving cars using the Nvidia Jetson Tx2 controller board and ZED stereo camera. Further, designed a deep learning architecture for multi-class pixel-wise image segmentation and classification, trained the model using Google Images. Moreover, optimized this with the embedded hardware to implement autonomous lane navigation on the Mahraindra self-driving vehicle with an unprecedented accuracy of 93%.



NATIONAL UNIVERSITY OF SINGAPORE (NUS)

Ref: Dr. REN Hongliang, *Assistant Professor, Dept of Biomedical Engineering*

Lab: MEDICAL MECHATRONICS LABORATORY

Dur: Nov 2017 — Jan 2018

Posn: Tele-Research Intern

Worked on the visual odometry for indigestible capsule robots, specifically on transitional and rotational motion for the different types of endoscopic trajectories. This was implemented using a deep recurrent convolutional neural networks (RCNNs) and convolutional neural networks (CNN) for the visual odometry task, feature extraction with interpretation of dynamics.

Projects

ROBOTIC EXOSKELETON FOR STROKE REHABILITATION

Dur: Jan 2019 — On going (Final Year Project)

Guide: Dr. C. Nagamani, *Professor, Dept of Electrical and Electronics Engg (NIT Trichy)*

We are developing an intelligent knee-ankle-foot robot, which is compact, modular, and portable, for stroke patients to carry out gait rehabilitation at outpatient and home settings. Electromyography signals from the critical muscle groups were used to detect human intent, and an adaptive shared control system was developed to control the system.

GENOMIC DATA ANALYSIS FOR HUMAN HISTORY VISUALIZATION

Dur: May 2019 — Sept 2019 | Platform: Canadian Centre for Computational Genomic

This project involved the classification of genetic data from chromosomes of different kinds of individuals. Implemented dimensional reduction using Uniform Manifold Approximation and Projection (UMAP) to fit the genetic data set in a 2D plane and then labeled the points.

CHINESE SCENE TEXT DETECTION & RECOGNITION IN VIDEOS

Dur: Jul 2018 — Oct 2018

Developed a Recurrent Neural Network (RNN) that accepts Chinese text as input and returns the English translation. The front end and the back end frameworks were implemented using Keras and Tensorflow respectively. The models acquired a validation accuracy of 92.6%