



## EDUCATION

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Program	Institution	Year of Completion
B Tech in Mechanical Engineering (Minor in Robotics)	Indian Institute of Technology Madras, Chennai	2018
XII	KE School ,Mannanam	2014
X	Bishop Moore Vidyapith , Mavelikara	2012

## SCHOLASTIC ACHIEVEMENTS

- All India Rank of 866 in JEE ADVANCED from more than 150,000 students
- Indian National Astronomy Olympiad for the year 2013-2014: 1<sup>st</sup> in Kerala
- Indian National Physics Olympiad for the year 2013-2014 : 3<sup>rd</sup> in kerala

## RELEVANT COURSE WORK - COMPLETED / TO BE COMPLETED BY MAY 2017

### MATHEMATICS

- Calculus I Functions of One Variable(MA1010)
- Calculus II Functions of One Variable (MA1020)
- Basic Graph Theory (MA2130)
- Probability, Statistics and Stochastic Process (MA2040)

### Electrical and Control Systems

- Electrical Sciences (EE2100)
- Instrumentation and Control (ME2240)

### Computer Science

- Computational Engineering (CS1100)
- Machine Learning ([Coursera](#))
- Artificial Intelligence (CS6380)
- Algorithms and Data Structures (EE4371)
- Computer Vision (CS6350)

### Robotics

- Introduction to Robotics (ID6040)
- Reinforcement learning (CS6700)

## Skills

### Programming

- C++,C,Python, Matlab, Java
- NodeJs,HTML,CSS,JavaScript
- Well Versed with OpenCV
- Deep Learning platforms including tensor flow and caffe
- Have worked with Robot Operating System and proficient with linux

### Modelling

- PTC Creo Parametric, Autodesk AutoCad

## Research Projects

### Hand Gesture Recognition - [Center For Innovation](#)

January 2015-November 2015

- Made a program which could predict numbers written on air with the help of an RGBD camera,OpenCV and Caffe
- Awarded the **Most Technically Advanced Project** , in the **CFI Annual Tech Awards**, 2016
- Found out a [method](#) for Color based Segregation as result of this project

## Optical Music Recognition

April 2016-May 2016

- Input a photo of a musical notation, output a Musci XML file
- The Current System accurately detects the Note Head , the Time Signature, the Clefs and the Bar Lines in a Sheet Music

## Course Projects

### MINI SEGWAY

January 2016-April 2016

(Guide: [Sathyan Subbiah](#) , Manufacturing Engineering Section,IIT MADRAS)

- Designed and Manufactured a Inverted Pendulum, a self-balancing two-wheeled bot out of lightweight plastic chassis based on Arduino board
- Using Kalman filter on the signals from the MPU-6050,accelerometer and gyro sensor and then using a closed loop control system the orientation of the bot was pinpointed and was inputted into a PID controller which drove the two motors.PID tuning was done on Matlab

## PROFESSIONAL EXPERIENCE

[Hyperverge](#) : Computer Vision Intern

August 2015-December 2015

- Trained a neural network with caffe for classifying an image as a Document or non-document.

[Detect Technologies](#): Computer Vision Developer

May 2016-December 2016

- Created and Implemented a robust stitching algorithm to process the raw data acquired to give a precise stitched image.
- Implemented an Structure From Motion pipeline to generate a dense point cloud of the inspected structure.
- The stitching algorithm developed played a critical role for the company in securing an annual contract in reliance for more than 1 Cr rupees. It also paved the way for the company in obtaining multiple trials from various multinational companies in India.
- Received a PPO from from the company as a result of my contributions

## POSITIONS OF RESPONSIBILITY

- **Computer Vision Coordinator at CFI , IIT MADRAS**    August 2015-April 2016
  - Conducted computer vision sessions for juniors and mentored their projects
- **Shaastra Workshops coordinator**    August 2015-January 2016
  - Conducted a computer vision workshop at [SHAASTRA](#), ( the annual technical festival of IIT Madras) for which 150 students participated
- **Computer Vision Club Strategist at CFI ,IIT Madras**    May 2016- present
  - Coordinates the club activities and mentors the various projects in the club

## CO-CURRICULAR AND EXTRACURRICULAR ACTIVITIES

- Volunteered for National Service Organisation and worked with them for a period of one year teaching blind students at kodambakkam
- Interested in teaching
  - Taught at UDAAN , an initiative by the government of India for teaching underprivileged students
  - Conducted various sections for Juniors in Computer Vision at IIT Madras
- Plays piano
  - Organist and Choir member in the local Church