



EDUCATION

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Program	Institution	%/CGPA	Year of Completion
B Tech in Mechanical Engineering (Minor in Robotics)	Indian Institute of Technology Madras, Chennai	7.77	2018
XII	KE School ,Mannanam	94.2	2014
X	Bishop Moore Vidyapith , Mavelikara	94.3	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: 1st in Kerala
- Indian National Physics Olympiad for the year 2013-2014 : 3rd 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)
- Machine Vision (ME7180)

Robotics

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

Skills

Programming

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

PROFESSIONAL EXPERIENCE

[Hyperverge](#) : Computer Vision Intern

August 2015–December 2015

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

[Detect Technologies](#): Computer Vision Developer

May 2016–April 2017

- 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 Industries for more than 1 Crore 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 for the position of Computer Vision Team lead with a considerable amount of equity as a result of my contributions.

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

Evaluation of Grinding Wheel loading using Image Processing

January 2017-April 2017

(Guide: [Dr Arunachalam](#) , Manufacturing Engineering Section,IIT MADRAS)

- Developed an algorithm for Evaluation of Grinding Wheel and automated prediction of Grinding Wheel with the help of images captured in real time .This was done as a part of the course in Machine Vision (ME7180)
- In the process of publishing the findings in an international Conference

Probabilistic Volumetric Reconstruction

January 2017-May 2017

(Guide: [Sukhendu Das](#),Computer Science Department, IIT MADRAS)

- Implemented Volumetric Reconstruction following this [paper](#) .
- This was done as a part of the course on Computer Vision (CS6350)

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-Present

- 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
- Working on Converting the Project as a faster alternative for Musical Notation entry via createmelody.com

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- April 2017
 - Coordinates the club activities and mentors the various projects in the club

CO-CURRICULAR AND EXTRACURRICULAR ACTIVITIES

- A huge fan of Artificial Intelligence and Automation. I am quite aware of almost all the major changes happening in this field
- Volunteered for National Service Organisation and worked with them for a period of one year teaching blind students at kodambakkam
- Highly Interested in startups and new initiatives. Likes to think about new business ideas which can be useful for the world as a whole
- 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 a local Church