Trivikram A Thirukkonda | EE14B062 | 11/EE/18/061
Indian Institute of Technology Madras

EDUCATION

Program	Institute	CGPA/Percentage	Year
B.Tech in Electrical Engineering (Minor in Computational Biology)	Indian Institute of Technology Madras	8.38	2018
XII (Pre-university college)	Deeksha Center for Learning PU College	95	2014
X (ICSE)	St. Paul's English School	95.28	2012

SCHOLASTIC ACHIEVEMENTS

- IIT JEE 2014 - All India **Rank 444**
- KVPY 2014 - **Rank 175**
- Karnataka CET 2014 - **Rank 8** among 1.4 lakh aspirants

COURSE WORK

- Probability, Statistics, Stochastics
- Data Structures and Algorithms
- GPU Programming *
- Machine Learning for CV
- Deep Learning for Imaging *
- Computer Organization
- Secure Systems Engineering *

PRACTICAL LABS

- Computational Engineering (in C)
- Digital circuits and Verilog lab
- Microprocessors Lab (ARM)
- CAD Laboratory (C and Python)

SKILLS

- OpenCV (C++ and python)
- Caffe2 framework
- Arduino programming

PROJECTS AND PROFESSIONAL EXPERIENCE

- Pedestrian Detection using **Convolutional Neural Networks**: Internship, Samsung R&D Institute Bangalore **(2 months)**
  - Studied state-of-the-art **object detection** architectures like MS-CNN, PVA-Net, YOLO and Faster RCNN
  - Incorporated different concepts from MS-CNN and PVA-Net into YOLO to improve its performance
  - Wrote Python layers in **Caffe framework** for implementing YOLO
- GPS/IMU Sensor fusion and anti-spoofing: Internship, DRDO Research and Innovation Centre **(2 months)**
  - Fused GPS and IMU data using extended **Kalman Filter** for **uninterrupted position data** at high frequency
  - Determined possibility of **GPS spoofing** using trajectory calculated by IMU
- Autonomous Underwater Vehicle: Robosub competition 2016, Centre for Innovation IIT Madras **(1 year)**
  - **Pre-processing** of underwater images to compensate for uneven attenuation of colours and lighting
  - Implemented **machine learning techniques** to segment foreground objects from background
  - Detection and tracking of objects using OpenCV
  - Worked with a **CUDA enabled GPU** to speed up processing of images by 3.6 times
- Implementation of BCH encoding scheme: Error Control Coding course **(2 weeks)**
  - Implemented BCH encoding and decoding algorithms in MATLAB
  - Verified correctness and speed with built in BCH functions in MATLAB

POSITIONS OF RESPONSIBILITY

- Photography coordinator: Shaastra and Saarang 2016 **(3 months)**
  - Experimented with various photography techniques on different scenarios before and during the fests
  - Performed post-processing of photos using Adobe Lightroom
- Aerofest events coordinator: "HoWarCraft", Shaastra 2016 **(2 months)**
  - Designed the problem statement and arena for the event
  - Oversaw and took part in manufacturing and assembly of the arena

EXTRA CURRICULAR ACTIVITIES

- Actively attended and photographed **Extra Mural Lectures**
- NSO (National Sports Organization) Tennis – batch of 2015
- **Mentor** at Avanti Puducherry chapter 2014-15
- Completed level 1 of **Carnatic violin**.

*ongoing courses