

Amit Sharma

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ACADEMIC DETAILS

Examination	University/Board	Institute	Year	CPI/%
PG Specialization: PG	<i>M.Des in Electroninc Systems</i> IIITDM Kancheepuram	IIITDM, Kancheepuram	2018	8.25
UG Specialization: Graduation	<i>Instrumentation and Control Engineering</i> GCET Grater Noida	UPTU, Lucknow	2014	7.27
HSC	Maharashtra Board	Pragati College, Dombivali	2008	60.00
SSC	Maharashtra Board	R.C. Maruti High School, Mumbai	2006	80.40

FIELDS OF INTEREST

- Embedded Systems, Robotics, ML, RL, IoT, Analog Systems, Digital Electronics, Computer Vision, Micro-Controllers, Transducers and Sensors, Digital Signal Processing, Full Stack Development and Software Development

TECHNICAL SKILLS

- **Languages** (C, C++, Java, Scala), **Database** (MongoDB, Postgres), **Script** (Python), **OS** (Linux based OS like Raspbian, Wheezy, Noobs), **Python Modules** (Numpy, Scipy, Matplotlib, tensorflow, Keras, OpenCV, MongoDB, TkInter, wxPython), **Hardware Kits** (Tiva C, Raspberry Pi, Arduino, DC Motor, Stepper Motor, Servo Motor, ESC, BLDC, NB-IoT, Sensor Modules)

EXPERIENCE AND CERTIFICATION

- **Nine months research intern at Ericsson Global Services Chennai, India from Dec 4, 2017 till Aug 31, 2018** (Research works involved development of autonomous mobile robot using Deep Learning and Reinforcement Learning, IoT, and Computer Vision.)
- **Certification in DAT257x: Reinforcement Learning Explained offered by Microsoft on EDX**

MAJOR PROJECTS

- **Autonomous Print Delivery Mobile Robot Using AI** (Research Project)
(Guide: Dr. M. Saravanan (Principal Researcher at Ericsson India, m.saravanann@ericsson.com). , Dec'4, 2018 - till date)
 - Objective : Developed AI based cognitive system of mobile robot for autonomous indoor navigation.
 - Studied various related papers and implemented A* algorithm for finding the shortest path between two given nodes, Reinforcement Learning algorithm for unsupervised navigation in the environment following exploration and exploitation trade-off.
 - Implemented CNN based object classification and object detection in the robot for tracking and tracing any given object.
 - Also, integration of the IoT is done for carrying out autonomous indoor plant health monitoring. Ericsson's AppIoT platform is used for registering the device and its sensors for real time observation of values of the parameters affecting the health of the plants.
- **Wall Climbing Robot for Industrial Inspection** (M.Des Final Project)
(Guide: Dr. S. R. Pandian , Email: srp@iiitdm.ac.in)
 - Planning, Designing, and Development of Wall Climbing Robot (WCR) for industrial applications funded by IGCAR.
- **Autonomous Surface Cleaning Robot using TM4C1234GH6PM** (M.Des, Embedded System Course Project)
(Guide: Dr. S. R. Pandian , Email: srp@iiitdm.ac.in)

- Development of Surface Cleaning Robot that uses SHARP IR-sensors for collision detection. It follows a set of algorithms for cleaning the whole surface and can be controlled by a remote too.
- **Audio Amplifier using LM386** (M.Des, Analog IC Course Project)
(Guide: Dr. Sabita Ramkrishnan , sabita.ramkrishnan@gmail.com)
 - · It involves the study of audio amplification using Texas Instruments lm386 audio amplifier ICs.
- **MRI Brain Image Segmentation Using Fuzzy C-Mean Clustering Algorithm** (M.Des, Digital Signal Processing Course Project)
(Guide:Dr. Priyanka Kokil , priyanka@iiitdm.ac.in)
 - I used Matlab for the implementation of modified fuzzy-c means clustering algorithm for the segmentation of brain tumor using MRI brain image.
- **Collision Detection and Avoidance of Railway Traffic Using 8085** (B. Tech, Final Year Project)
(Guide: Ms. Binni Verma)
 - We developed a collision detection and avoidance model for railway traffic using 8051 microcontroller and IR sensors.

STRENGTHS

- Positive Attitude, Social Interaction, Hardworking.
- Mind is everything, what you think, you become.

INTEREST AND HOBBIES

- Playing Cricket, Tennis, Snooker, Badminton, Yoga, .