

EDUCATION

Master of Science, Electrical and Computer Engineering, UT Austin August 2022 — Present
Bachelor of Tech. (Honors), Electrical Engineering, Computer Science, IIT Kharagpur (8.76/10.00) July 2016 — July 2020

RESEARCH AND INDUSTRY EXPERIENCE

Graduate Research Assistant: Computer Vision Nov 2022 — Present
Advisors: Dr. Dhiraj Murthy, Dr. Anna Wilkinson (UT Austin) Austin, Texas 📍

- Currently developing Vision based computational models/pipelines to identify mechanisms underlying electronic nicotine delivery system (ENDS)-related social media exposure and ENDS use among young adults and examine the role of acculturation as a moderator of these mechanisms
- Supervising undergraduate research assistants working on this project as part of the [Computational Media Lab](#)

Power Electronics Software Engineer Sept 2020 — August 2022
Jaguar Land Rover Bengaluru, India 📍

- Investigated Computer Vision R&D projects like driving assist technology and fault prediction for validation
- Filed an invention disclosure for electric vehicle charging hardware and software

Undergraduate Research Assistant: Computer Vision Jan 2020 — Sept 2020
Supervisors: Dr. Manas K Mandal, Dr. Priyadarshi Patnaik (Rekhi Centre, IIT Kharagpur) [keshariS/EmotionAnalysis](#) 📍

- Designed an algorithm for measuring facial asymmetry and emotion incongruity from real time videos using CNNs.
- Developed an application using tkinter GUI library for a user-friendly interaction with the software.
- Enhanced accuracy of Facial emotion recognition model from 70% to 87% using custom datasets and AWS

Bachelors dissertation: Charger Design for light Electric Vehicles July 2019 — Mar 2020
Supervisor: Dr. Dipankar Debnath (Dept of EE, IIT Kharagpur) [keshariS/charger4LightEVs](#) 📍

- Designed an efficient AC charger for light electric vehicles using interleaved boost PFC followed by PSFB topology.
- Designed additional auxiliary power supplies using the flyback and buck converters, fabricated and tested the hardware.

EV Research Group Lead Oct 2017 — Mar 2020
Supervisor: Dr. Vikranth Racherla (CRR, IIT Kharagpur) < Official Vehicle Launch Story >

- Designed modular power and driver boards for implementing 400W and 1kW BLDC motor controllers, and 3kW charger
- Mentored juniors about the prototypes and helped launch the startup [Webber Electrocorp](#) in Sept. 2019

TECHNICAL SKILLS

Programming C/C++, Python (opencv, keras, tkinter GUI), AWS, Git, HTML, CSS
Software [CARLA Simulator](#), Jupyter, PyTorch, Visual Studio, MATLAB, ROS, PSIM, Cadence

RELEVANT COURSEWORK

Graduate - planned Advanced Computer Vision, Robot Learning, Autonomous & Connected EVs
Coursera Specializations [Self Driving Cars](#) (University of Toronto) || [Deep Learning](#) || [Machine Learning](#) (Stanford)
Undergraduate Advanced Image Processing, Machine Learning, Data Structures & Algorithms

AWARDS & HONORS

2020 Systems Society Award (**Best B. Tech Thesis among 3 engineering departments**)
2019 Silver Trophy (**Inter IIT Tech Meet 8.0, IIT Roorkee**)

LEADERSHIP & COMMUNITY OUTREACH

Astroclub Sub-Head, Space Technology Student's Society, IIT Kharagpur Jan 2017 — Oct 2017

- Chief editor for 'Moonwalk' (Official Newsletter) and Manager of Space Technology Awareness Camp in Eastern India
- Organized a nationwide event 'National students space challenge' for students from over 100 universities across India

Social work in rural Kharagpur, National Service Scheme July 2016 — Dec 2017

- Taught young primary school students and built a road for the rural village of Talbagicha Kharagpur 📍