

## EDUCATION

**The University of Texas at Austin**, Master of Science, Electrical and Computer Engineering May 2024  
**IIT Kharagpur**, Bachelor of Tech. (Honors), Electrical Engineering, Minor in CS (GPA: 8.76/10.00) July 2020

## INDUSTRY EXPERIENCE

**Texas Instruments** May 2023 — August 2023  
Systems Engineer: Internship Dallas, Texas

- Optimized system performance by comparison of GaN and Si devices using TI's latest gate driver evaluation module for notebook charging application: USB-C Power Delivery at 140W-240W @600kHz with 5A input
- Designed the PCB co-layout for 2 different charging controllers and tested the hardware

**Jaguar Land Rover** Sept 2020 — August 2022  
Power Electronics Engineer Coventry, United Kingdom

- Filed a patent (under review) related to EV charging hardware for the company's next-gen EVs
- Simulated 11kW and 22kW (240V AC to 600V DC to 400/800V DC) on-board charger circuits including thermal analysis
- Designed and evaluated topologies like totem-pole PFC, DAB, PSFB, and resonant CLLC ensuring ZVS & ZCS operation
- Investigated device/component selection, controller design, efficiency optimization, and PCB design

**Webber Electrocorp** Sept 2019 — Mar 2020  
Founding Chief Power Electronics Engineer IIT Kharagpur, India

- Helped launch the most well-funded campus startup in Sept. 2019 Read: [Official Vehicle Launch Story](#)
- Built initial 3kW EV charger prototypes for the startup and mentored/recruited several candidates

## ACADEMIC/RESEARCH EXPERIENCE

**UT Austin Power Electronics Lab: Graduate Teaching Assistant** Sept 2023 — Present  
Advisor: Dr. Brian Johnson Austin, Texas

- Managing and re-designing the Power Electronics Lab (ECE462L/ECE394) for 40 senior/graduate students

**UT Austin CML: Graduate Research Assistant** Nov 2022 — May 2023  
Advisors: Dr. Dhiraj Murthy, Dr. Anna Wilkinson Austin, Texas

- Investigated social media data to explore multi-modal Machine Learning techniques and also supervised undergraduates as part of the [Computational Media Lab](#)

**IIT Kharagpur Bachelors Dissertation: "Charger Design for light Electric Vehicles"** July 2019 — Mar 2020  
Advisor: Dr. Dipankar Debnath [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.

**IIT Kharagpur EV Research Group Lead** Oct 2017 — Mar 2020  
Advisor: Dr. Vikranth Racherla IIT Kharagpur, India

- Designed modular power and driver boards for implementing 400W and 1kW BLDC motor controllers
- IIT Kanpur startup - Skytex**: Collaborated on an Unmanned Aerial Vehicle project
- MOOC Specializations: [Power Electronics](#) (University of Colorado Boulder) || [Electric Cars](#) (TU Delft)

## AWARDS & HONORS

**2020 Systems Society Award** (Best B. Tech Thesis among Electrical, Energy and Instrumentation Engineering depts.)  
**2019 Silver Trophy** ([Inter IIT Tech Meet 8.0](#), IIT Roorkee: Tech competition among 20 major IITs)  
**2016 KVPY National Fellow** (funded by the Department of Science and Technology, Government of India)

## LEADERSHIP & COMMUNITY OUTREACH

**spAats: Space Technology Students' Society, IIT Kharagpur: Space Club Lead** 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

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

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