+1 (737) 484 6685
skeshari@utexas.edu

Shuvam Keshari

Austin, Texas
< *My website* >

Education

Master of Science, Electrical and Computer Engineering, UT Austin — **August 2022 — Present**

Bachelor of Tech. (Honors), Electrical Engineering, Minor in CS, IIT Kharagpur (GPA: 8.76/10.00) — **July 2016 — July 2020**

Industry Experience

Power Electronics Engineer — **Sept 2020 — August 2022**

Jaguar Land Rover — Bengaluru, India

- Filed a patent (under review) related to electric vehicle 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 totempole PFC, DAB, PSFB, resonant CLLC ensuring ZVS and ZCS operation
- Investigated device/component selection, controller design, efficiency optimization and PCB designing
- Collaborated with suppliers and teams in the UK to improve product robustness of existing EVs and PHEVs

Chief Power Electronics Engineer — **Sept 2019 — Mar 2020**

Webber Electrocorp, Founders: Mr. Manuj and Mr. Shyama Agrawal — IIT Kharagpur, India

- Built initial 3kW EV charger prototypes for the startup and mentored several juniors

Research Experience

Graduate Research Assistant — **Nov 2022 — Present**

Advisors: Dr. Dhiraj Murthy, Dr. Anna Wilkinson (UT Austin) — Austin, Texas

- Currently developing Vision-based computational models/pipelines for social media data
- Investigating Data Analysis using Oracle Cloud (scraping) and deploying custom ML models for inference
- Supervising undergraduate research assistants working on this project as part of the Computational Media Lab

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

Associate PCB Designer, Skytex, Founder: Mr. Mohit Gupta, Supervisor: Dr. S. Saderla — **Dec 2018 — Jan 2019**

- Designed the PCB for the communication module of an Unmanned Aerial Vehicle — IIT Kanpur, India

Associate Embedded Engineer, Alive Home, Founder: Ms. Poonam Gupta — **Aug 2017 — Jan 2018**

- Debugged and validated ioT Smart Switch Modules (ESP8266) installed in 70+ residential rooms — IIT Kharagpur, India

Technical Skills

MOOC Specializations	Power Electronics (University of Colorado Boulder) || Electric Cars (TU Delft)
Software	MATLAB/Simulink, PSIM, Cadence, Altium Designer, KiCad, LTSpice, JIRA
Programming	C/C++, Python (opencv, keras, tkinter GUI), Embedded programming

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**)

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