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Shuvam Keshari

Austin, Texas 📍
< My website >

EDUCATION

Master of Science, Electrical and Computer Engineering, UT Austin
Bachelor of Tech. (Honors), Electrical Engineering, Minor in CS, IIT Kharagpur (GPA: 8.76/10.00)

August 2022 — Present
July 2016 — July 2020

INDUSTRY EXPERIENCE

Power Electronics Engineer
Jaguar Land Rover

Sept 2020 — August 2022
Bengaluru, India 📍

- Filed an invention disclosure 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
Webber Electrocorp, Founders: Mr. Manuj and Mr. Shyama Agrawal

Sept 2019 — Mar 2020
IIT Kharagpur, India 📍

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

RESEARCH EXPERIENCE

Bachelors dissertation: "Charger Design for light EVs"
Supervisor: Dr. Dipankar Debnath (Dept of EE, IIT Kharagpur)

July 2019 — Mar 2020
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
Supervisor: Dr. Vikranth Racherla (CRR, IIT Kharagpur)

Oct 2017 — Mar 2020
< 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, 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 📍