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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, Computer Science, IIT Kharagpur (8.76/10.00)   **July 2016 — July 2020**

RESEARCH AND INDUSTRY EXPERIENCE

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

Computer Vision Research Assistant   **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 Amazon Web Services

Bachelors dissertation: "Charger Design for light EVs"   **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

Operations Research Intern   **May 2019 — July 2019**
ITC Limited   Mysuru, India ●

- Optimized and established a business opportunity that could be beneficial for the company, farmers and society at large involving multiple stakeholders. Skills: Data Analysis, Operations Management, Strategic Planning and Market Research

TECHNICAL SKILLS

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

RELEVANT COURSEWORK

Graduate   Brain-Computer Interface, Advanced Computer Vision (planned), Robot Learning (planned)
Coursera Specializations   Self Driving Cars (University of Toronto) || Deep Learning
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 ●