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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**

Publications

"Stable Remaster: Bridging the Gap Between Old Content and New Displays" | Paull N., **Keshari S.**, Wong Y. (Read here)
"Categorizing ENDS-related Tweets using BERT Topic Modeling" | Murthy D., **Keshari S.**, Arora S., Yang Q.
"Large Cigar Detection in social media using YOLOv7" | Kong G., **Keshari S.**, Ouellette R., Lee J., Murthy D.

Research and Industry Experience

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

- Optimizing system performance by comparison of GaN and Si devices using TI's latest gate driver evaluation module

Graduate Research Assistant: Computer Vision/NLP — **Nov 2022 — May 2023**
Advisors: Dr. Dhiraj Murthy, Dr. Anna Wilkinson (UT Austin) — Austin, Texas

- Developed Vision-based computational models/pipelines to identify mechanisms underlying electronic nicotine delivery system (ENDS)-related social media exposure and ENDS use among young adults
- Investigated social media data using Oracle Cloud (scraping), and deploying custom Yolo and BERT models (inference) to explore multi-modal ML techniques [*Paper Presentation: SRNT, San Antonio*]
- Supervised 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 a patent (under review) 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) — Read: *keshariS/charger4LightEVs*

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 a BLDC motor controller and a charger
- Mentored sophomores/juniors about the prototypes and helped launch the startup Webber Electrocorp in Sept. 2019

Technical Skills

Programming	C/C++, python (opencv, keras, tkinter GUI), OCI, AWS, Git, HTML, CSS
Software	CARLA Simulator, Jupyter, PyTorch, VS Code, MATLAB, ROS, PSIM, Cadence

Relevant Coursework

Graduate	Applied Machine Learning, Advanced Computer Vision, 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 Bachelors dissertation among 3 engineering departments**)
2019 Silver Trophy (**Inter IIT Tech Meet 8.0, IIT Roorkee**)