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Shuvam Keshari

Austin, Texas
< *My website* >

Education

The University of Texas at Austin, Master of Science, Electrical and Computer Engineering — **August 2022 — Present**
IIT Kharagpur, Bachelor of Tech. (Honors), Electrical Engineering, Minor in CS (GPA: 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. (Submitted)
"Decoding Brain Motor Imagery: with various Machine Learning techniques" | Jana G., Karnei C., **Keshari S.** (Read here)
"Large Cigar Detection in social media using YOLOv7" | Kong G., **Keshari S.**, Ouellette R., Lee J., Murthy D. (Submitted)
"Facial asymmetry: Computer Vision based behaviometric index for interview assessment" | Dutta T., **Keshari S.**, Mullick R.

Research and 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

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

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

IIT Kharagpur Rekhi Center: Undergraduate Research Assistant: Computer Vision — **Jan 2020 — Sept 2020**
Advisors: Dr. Manas K Mandal, Dr. Priyadarshi Patnaik — *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

ITC Limited — **May 2019 — July 2019**
Operations Research Intern — Mysuru, India
- **Skills**: Data Analysis, Operations Management, Strategic Planning and Market Research

IIT Kharagpur EV Research Group Lead — **Oct 2017 — Mar 2020**
Advisor: Dr. Vikranth Racherla — Read: *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, scikit-learn), 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 B. Tech Thesis among Electrical, Energy and Instrumentation Engineering depts.)
2019 **Silver Trophy** (Inter IIT Tech Meet 8.0, IIT Roorkee)
2016 **KVPY Fellow SA2014** (funded by the Department of Science and Technology, Government of India)