Sameeksha Katoch

CONTACT 480-692-0412 sam94katoch@gmail.com

RESEARCH INTERESTS Deep Learning, Computer vision, Signal Processing

EDUCATION Ph.D., *Expected:* Spring 2021. MS, *S*pring 2018.
Electrical Engineering, **Arizona State University**,Tempe, AZ

WORK EXPERIENCE

Student Computing Intern, Lawrence Livermore National Labs, CA June to Aug 2020
Developing privacy preserving AI models and encryption strategies for data de-identification along with analysis script for empirical calibration error in deep learning based diagnostic applications.

Data Scientist Intern, Prime Solutions Group, AZ May 2018 to Aug 2018
Developed a predictive analysis model using LSTMs and RNNs for photovoltaic power output based on multivariate weather data for the Arizona region.

PUBLICATIONS

1. **S. Katoch***, V.S. Narayanaswamy*, J.J. Thiagarajan, H. Song, A. Spanias, "Audio Source Separation via Multi-Scale Learning with Dilated Dense U-Nets".
2. J.J. Thiagarajan, D. Rajan, **S. Katoch**, A. Spanias "DDxNet: A Multi-Speciality Diagnostic Model for ECG and EEG", in Nature Scientific Reports, 2020. (coming soon)
3. **S. Katoch***, K. Thopalli*, J.J. Thiagarajan, P. Turaga, A. Spanias, "Invenio: Discovering Hidden Relationships Between Tasks/Domains Using Structured Meta Learning".
4. **S. Katoch***, D. Mohan*, S. Jayasuriya, P. Turaga, A. Spanias, "Adaptive Video Subsampling for Energy-Efficient Object Detection", *ASILOMAR*, 2019.
5. **S. Katoch**, P. Turaga, A. Spanias, C. Tepedelenlioglu, "Fast Non-Linear Methods for Dynamic Texture Video Prediction," in IEEE International Conference on Image Processing, *ICIP*, 2018.
6. **S. Katoch**, G. Muniraju, S. Rao, A. Spanias, P. Turaga, C. Tepedelenlioglu, M. Banavar, and D. Srinivasan,"Shading Prediction, Fault Detection, and Consensus Estimation for Solar Array Control," in IEEE *ICPS* 2018.

SOFTWARE SKILLS
- Python, Tensorflow, Pytorch, Keras, Matlab, SPSS, LateX, Microsoft Visio

RELATED COURSE WORK
- Statistical Machine Learning, Computer Vision, Artificial Neural Computation, Digital Image and Video Processing, Detection/Estimation Theory, Adaptive Signal Processing, Random Signal Theory, Linear Algebra and Convex Optimization, Neural Network and Deep Learning

PRESENTATIONS
- NCSS/IUCRC Meeting, Denton — March 11, 2019
- MEMS and Sensors Technical Congress, California — Feb 19, 2019
- ICIP Poster, Athens, Greece — Oct 6, 2018

TEACHING EXPERIENCE Teaching Assistant Fall 2016–Present
EEE407/591 - Digital Signal Processing, EEE334 - Circuits II

AWARDS IEEE Al Gross Award April 6, 2019
Contribution to the field of engineering science.