

INTERESTS	Explainable AI, Domain adaptation, Computer vision, Deep learning, Biometrics	
EDUCATION	Master of Engineering, Software Systems	2018 - present
	<i>Birla Institute of Technology and Science, Pilani</i>	<i>GPA : 7.84/10.0</i>
	<i>Thesis : Hyperspectral guided Image Dehazing</i> <i>Advisor : Dr. Pratik Narang</i>	
	Bachelor of Engineering (Hons.), Electrical & Electronics	2013 - 18
	<i>Birla Institute of Technology and Science, Pilani</i>	<i>GPA : 7.97/10.0</i>
	<i>Thesis : Deep Learning for Biometrics</i> <i>Advisor : Dr. Pawan K Ajmera</i>	
	Master of Science (Hons.), Chemistry	2013 - 18
	<i>Birla Institute of Technology and Science, Pilani</i>	<i>GPA : 7.97/10.0</i>
	<i>Thesis : Emission Properties of triplet harvesting AIE active materials in the reverse micelles of gemini surfactants: Effect of spacer chain length</i> <i>Advisor : Dr. Subit K Saha, Dr. Inamur R Laskar</i>	
RESEARCH EXPERIENCE	Web Intelligence & Social Computing (WISoC) Group, BITS Pilani	
	<i>Mentor: Dr. Yashvardhan Sharma</i>	Jan 2019 - May 2019
	Extensive experiments were conducted on VMU 2015 dataset finally proposing a text-based CNN to learn semantic word embeddings for fake news detection in tweets.	
	CSIR - Central Electronics Engineering Research Institute, Pilani	
	<i>Mentor: Dr. Santanu Chaudhury (Director, IIT, Jodhpur)</i>	July 2018 - Dec 2018
	Explored the immense potential of Generative Adversarial Networks (GANs) to generate 31 band hyperspectral images from RGB images employing the idea of neural oscillations to train GANs.	
	Samsung R&D Institute, Noida	
	<i>Mentors: Mr. Chetan Chauhan, Mr. Ashish Thakur</i>	Summer 2017
	Proposed a Convolutional Encoder Decoder Network for End to End Image Generation using Tensorflow. The architecture was trained to detect blurred region of images in a pixel-by-pixel manner without any external estimation techniques.	
JOURNAL ARTICLES	<u>Harsh Sinha</u> , Vinayak Awasthi and Pawan K Ajmera. "Audio Classification using Braided Convolutional Neural Networks" IET Signal Processing. 2020. (In Press)	
	<u>Harsh Sinha</u> and Pawan K. Ajmera. "Upgrading Security and Protection in Ear Biometrics" IET Biometrics 8, no. 4 (2019): 259-266.	
CONFERENCE PROCEEDINGS	<u>Harsh Sinha</u> , Sakshi Kalra and Yashvardhan Sharma. "Text-Convolutional Neural Networks for Fake News Detection in Tweets" In Frontiers in Intelligent Computing: Theory and Applications. Springer, 2020.	
	<u>Harsh Sinha</u> , Raunak Manekar, Yash Sinha, and Pawan K Ajmera. "Convolutional Neural Network-based Human Identification using Outer Ear Images" In Soft Computing for Problem Solving, pp. 707-719. Springer, 2019.	
	<u>Harsh Sinha</u> , Shivin Srivastava, and Yash Sinha. "Studying the Role of Kinect as a Multi-Sensory Learning Platform for Children". In Proceedings of the 2018 ACM International	

Joint Conference and 2018 International Symposium on Pervasive and Ubiquitous Computing and Wearable Computers (**UbiComp 2018**), pp. 251-254. ACM

WORKSHOP PROCEEDINGS

Aditya Mehta, Harsh Sinha, Pratik Narang and Murari Mandal. "HIDEGAN: A Hyperspectral-guided Image Dehazing GAN" Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition (**CVPR 2020**) Workshops.

Harsh Sinha and Pawan K. Ajmera. "Interweaving Convolutions: An application to Audio Classification". KDD Deep Learning Day, 24th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (**KDD 2018**), London.

TECHNICAL SKILLS

Languages & Software: PyTorch, TensorFlow, Keras, Python, MATLAB, Java, C/C++
Courses: Object Oriented Analysis and Design, Data Mining, Machine Learning
MOOCs: Machine Learning, Data Science Specialization

PROJECTS

Reducibility among Combinatorial Problems Aug 2019 - Oct 2019
ViSoft: Visualization in Software Testing Aug 2019 - Oct 2019

Machine Learning

A Variational Training perspective to GANs for Hyperspectral Image Generation Jan 2018 - Dec 2018

Computer Vision

Detection of Amur Tigers in the Wild Aug 2019 - Oct 2019
Query Based Deep Face Image Retrieval Jan 2019 - May 2019

NLP

Real-time Twitter Sentiment Analysis Jan 2019 - May 2019

Spring MVC

Estate Security Management System Jun 2018 - Dec 2018

PROFESSIONAL SERVICE

Reviewer : IET Biometrics, BMVC 2020

HONORS & AWARDS

UbiComp 2018 Travel Grant Oct 2018
Awarded a travel reimbursement of USD 600 for UbiComp '18

Microsoft Code.Fun.Do. Finalist Forum Feb 2016 - August 2016
Runners Up across top 15 universities in India. Developed a Kinect-based learning platform which consisted of multiple games and a dashboard to help specially-abled children overcome difficulties in education. Awarded prizes worth INR 1,00,000.

EXTRA CURRICULAR ACTIVITIES

Johns Hopkins University
Community Teaching Assistant. Responsible for supporting student learning on discussion forums at Coursera for the courses Exploratory Data Analysis and Reproducible Research

Prayag Sangeet Samiti, Allahabad
Sangeet Prabhakar in Tabla. Equivalent to *Bachelor of Music* in Vocal/Instrumental.

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