EDUCATION U

University of Pittsburgh

2021 - present GPA: 3.9/4.0

Ph.D. Intelligent Systems

Advisor : Dr. Adriana Kovashka Recipient of SCI Fellowship, Dept. of Intelligent Systems

Birla Institute of Technology and Science, Pilani

M.E. Software Systems	2018 - 20
M.Sc. (Hons.) Chemistry	2013 - 18
B.E. (Hons.) Electrical & Electronics	2013 - 18

SELECTED PUBLICATIONS

Cycle Consistent Embedding of 3D Brains with Auto-Encoding Generative Adversarial Networks. Shibo Xing, <u>Harsh Sinha</u>, and Seong Jae Hwang. In International Conference on Medical Imaging with Deep Learning (MIDL 2021)

Learning to Enhance Visual Quality via Hyperspectral Domain Mapping (Student Abstract) <u>Harsh Sinha</u>, Aditya Mehta, Murari Mandal and Pratik Narang. *In AAAI Conference on Artificial Intelligence* (AAAI 2021)

Domain-Aware Unsupervised Hyperspectral Reconstruction for Aerial Image Dehazing Aditya Mehta, <u>Harsh Sinha</u>, Murari Mandal and Pratik Narang. *In IEEE Winter Conference on Applications of Computer Vision* (WACV 2021)

HIDeGAN: A Hyperspectral-guided Image Dehazing GAN. Aditya Mehta, <u>Harsh Sinha</u>, Pratik Narang and Murari Mandal. *In IEEE Conference on Computer Vision and Pattern Recognition Workshops* (CVPR 2020).

Audio Classification using Braided Convolutional Neural Networks. <u>Harsh Sinha</u>, V. Awasthi and Pawan K Ajmera. *In IET Signal Processing*, 2020

Upgrading Security and Protection in Ear Biometrics. <u>Harsh Sinha</u> and Pawan K. Ajmera. In IET Biometrics, 2019

Studying the Role of Kinect as a Multi-Sensory Learning Platform for Children. <u>Harsh Sinha</u>, Shivin Srivastava, and Yash Sinha. *In ACM International Joint Conference on Pervasive and Ubiquitous Computing*. (UbiComp 2018)

Interweaving Convolutions: An application to Audio Classification. <u>Harsh Sinha</u> and Pawan K. Ajmera. *KDD Deep Learning Day, In International Conference on Knowledge Discovery and Data Mining* (KDD 2018)

TECHNICAL SKILLS

Languages: PyTorch (Geometric, Lightning), R, Keras, Python, Java, C/C++ Courses: Machine Learning, Computer Vision, Object Oriented Programming, Data Mining, Information Retrieval

MOOCs: Data Science Specialization

EXPERIENCE

Graduate Student Researcher

University of Pittsburgh

Mentor: Dr. Adriana Kovashka

May 2021 - Present

Used Graph Neural Networks on images to learn an invariant graph-based representation for shape achieving robust generalization to unseen dataset distributions.

Research Assistant

CSIR-CEERI, Pilani

Mentor: Dr. Santanu Chaudhury (Director, IIT Jodhpur) July 2018 - Dec 2018 Explored the potential of Generative Adversarial Networks (GANs) to generate 31 band hyperspectral images from RGB images.

Summer Intern

Samsung R&D Institute, Noida

Mentors: Mr. Chetan Chauhan, Mr. Ashish Thakur

Summer 2017

HONORS & AWARDS

Fellow, Department of Intelligent Systems

Jan 2021

Awarded to a select few doctoral students across the School of Computing and Information at the University of Pittsburgh.

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.

PROFESSIONAL

Reviewer: BMVC 2020, WACV 2021, 2022, GLOBECOM 2021, IET Biometrics

SERVICE

Johns Hopkins University

EXTRA CURRICULAR ACTIVITIES

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.