## Girish Chandar G

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## OBJECTIVE

Motivated graduate student interested in pursuing Ph.D. in the domain of Computer Vision and Deep Learning focusing on Long-tailed recognition, Zero-shot learning, 3D reconstruction and generation. I have relevant academic knowledge and research experience pertaining to Deep Learning applications in Computer Vision and proficient in Python and use of deep learning frameworks like PyTorch and Tensorflow.

## **EDUCATION**

University of Michigan, Ann Arbor, MI, USA M.S. Electrical and Computer Engineering Indian Institute of Technology Gandhinagar, Gandhinagar, India B.Tech. Electrical Engineering (minor Computer Science)				Aug 2021 – Apr 2023 GPA - 4/4	
				July 2016 – Aug 2020 GPA - 8.98/10	
COURSEWORK / SKILLS					
<ul> <li>Foundations for Computer Vision (A)</li> <li>Machine Learning (A)</li> </ul>	<ul> <li>Matrix Methods for Machine Learning (A+)</li> </ul>	<ul> <li>3D Computer Vision (A)</li> <li>Deep Learning for Computer Vision (A)</li> </ul>	<ul> <li>PyTorch, Tensorflow, MXNet</li> <li>MATLAB, LabVIEW</li> </ul>	• Numpy, OpenCV, Sklearn, Pandas	
<u>POSITION</u> Craduata Studant Basanak	A asistant   Dr. Stalla	V. University of Mishi	ann Ann Anhan 🔽		
<b>Besearch Intern</b>   NVIDIA (	Assistant   Dr. Stella	<u>i iu, University of Michig</u>	gan-Ann Arbor 🖸	Present	
Research Intern   Zentron Labs				May 2022 – August 2022	
INTER NSHID				Oct 2020 – Aug 2021	
Stance Harrand Detection   N	WIDIA   DyTarah			N 2022 A 2022	
Implemented end-to-end de Better performance than ex Auto Shape Detection in M Implemented Arc Detection	eep learning model using isting algorithm in terms lachine Vision I   Zen n algorithm that gives acc	custom UNet as backbone for of achieving <b>zero</b> false positiv <u>utron Labs</u>   <u>Python (Num</u> ruracies of <b>100%</b> on simulated	r feature map extraction. res. 1 <u>py, OpenCV)</u> data and 80% on real data.	May 2022 - Aug 2022 Oct 2020 – Aug 2021	
Improved Line and Circle I	Detection accuracies from	65% to 90%	1 . (1)		
Optimization based Inverse     Implemented algorithm for     3D Morphable Model (3DM	<u>E <b>Kendering ∩</b>  <i>Univer</i> 3D face reconstruction fi IM) used as aprori mesh f</u>	<u>sity of Texas Dallas</u>   <u>PyTc</u> rom 2D images. or efficient inverse rendering.	orch, MXNet, Numpy	May 2019 – July 2019	
Microscopic Image Analysis • Developed LabVIEW script PROJECTS	<u>s</u> O  <u>Clemson Universit</u> s for analyzing images fro	y   <u>LabVIEW</u> om Magnetic Rotational Spect	roscopy (MRS) experiment.	May 2018 – July 2018	
SAR-NeRF   PyTorch				Present	
Research focused on modifying NeRF for 3D reconstruction of complex-valued radar data.					
				Present	
Small NeRF 🗗   PyTorch				Apr 2022	
• Implemented a modified version of NeRF to reduce training time and computational cost.					
<ul> <li>Experimented with multiple arcmitectures to determine the best approximation of the original verte:</li> <li><u>Co-Tuning for Transfer Learning on TACO Dataset</u> ()   <u>PyTorch</u></li> <li>Implemented and verified the novel transfer algorithm proposed in "Co-tuning for Transfer Learning".</li> <li>First team to implement co-tuning on TACO (Trash Annotations in Context) dataset.</li> </ul>				Dec 2021	
<ul> <li><u>Classification of Cancer Progression by Structuring Clinical Data   Tensorflow</u></li> <li>Developed a novel model to predict the probability of cancer by structuring Electronic Health Records using NLP techniques.</li> <li>Explored MIMIC-III dataset extensively and verified its potential to be used for cancer prediction</li> <li>Structured the clinical data using CliNER, and BioBERT embedding</li> </ul>				<b>Dec 2019</b> [LP techniques.	
Forensic Camera Model Cla • Implemented algorithm to i • Implemented One vs All cla • Created novel dataset to test	assification using Loc identify source camera fro assification model using I st the model.	eal Binary Pattern   MAT om images. Local Binary Patterns as featur	<u>LAB</u> es.	Apr 2018	
<u>Unsupervised Cross-Domain Image Transfer using GAN</u> O   <u>PyTorch</u> • Implemented Encoder+GAN with modified loss and verified the results for cross-domain transfer between MNIST and SVHN.				Apr 2019 IST and SVHN.	
Patch based Multi-View Stereopsis   Python (Numpy, OpenCV)				Apr 2020	
Normalized cuts and segmentation O   Python (Numpy, OpenCV)				Apr 2019	
Face Detection using Eigenfaces   Python (Numpy, OpenCV)				Dec 2018	