

SKILLS

Computer Vision
Deep Learning
Machine Learning
PyTorch
Python
TensorFlow
MATLAB

RELEVANT COURSES

Computer Vision
Artificial Intelligence
Neural Networks and Fuzzy Logic
Digital Image Processing
Database Systems
Algorithms
Object Oriented Programming
Computer Programming
Multi Variable Calculus
Linear Algebra and Complex Analysis
Differential Equations
Probability and Statistics

CERTIFICATIONS

Deep Learning Specialization by deeplearning.ai
Machine Learning by Andrew Ng
Game Theory by M. Kandori

OTHER ACHIEVEMENTS

Among top 2% at BITS Pilani 2022 batch
DAAD-WISE 2021 Scholarship Recipient
State Rank 1 in NSTSE 2017

EDUCATION

PhD Computer Science

Johns Hopkins University
Advisor: Prof. Rama Chellappa

📍 Baltimore, MD

📅 2022-present

B.E. Computer Science

Birla Institute of Technology and Science (BITS), Pilani

📍 Pilani, India

📅 2018-2022

CGPA

9.58 / 10

PUBLICATIONS

- **WACV 2024:** You can Run but not Hide: Improving Gait Recognition with Intrinsic Occlusion Type Awareness
Ayush Gupta, Rama Chellappa
 - Accepted as an **oral paper** (Top 2.5% of submissions)
- MimicGait: A Model agnostic approach for Occluded Gait Recognition using Correlation Knowledge Distillation (under review)
Ayush Gupta, Rama Chellappa
- EchoSAM: Predicting Ejection Fraction using Segmentation Guided Vision Transformers (under review)
Basudha Pal, Ayush Gupta, Vishal M. Patel, Rama Chellappa

TEACHING EXPERIENCE

Teaching Assistant: Machine Perception, Fall 2023

- Designed a NeRF-based project to introduce students to Nerfstudio
- Graded coursework

PROJECTS

Biometrics Recognition and Identification at Altitude and Range (BRIAR)

Research grant funded by IARPA. Working as a researcher at JHU

08/2022 – Present

- Developing algorithms for occluded gait recognition
- Collaborating with teams from STR, UT Dallas and West Virginia University
- Working with turbulent data captured from distances of up to 1000m

Undergraduate Thesis: Vision based Gait Recognition

Supervision of Dr. Yogesh Singh Rawat at **CRCV, University of Central Florida**

05/2021 – 06/2022

- Unsupervised Gait Recognition on RGB modality
- Utilized self-similarity matrices for capturing gait patterns using Transformers
- Improved recognition accuracy over unsupervised baselines on FVG and CASIA-B datasets

Video captioning

Under Prof. Poonam Goyal, **ADAPT LAB, BITS Pilani**

07/2020 – 05/2021

- Developed video captioning models using external knowledge graphs
- Worked on MSVD and MSRVT datasets using SAAT captioning model

CLARIN COVID-19 Disinformation Hackathon

Part of **LT group, University of Hamburg, Germany**

09/2020 - 10/2020

- Developed baseline models for automatic fact-checking
- Used EUvsDisinfo dataset with LIAR Plus and news crawling APIs to verify a claim

Landcover Classification using Satellite Imaging

Summer project in **ISRO, India**

05/2020 - 07/2020

Contact: https://www.iirs.gov.in/contact_us

- Used Google Earth Engine to classify satellite image pixels into landcover categories
- Implemented the Spectral Angle Mapper, SVMs and K-Means learning algorithms

Course Projects

- Transfer Learning in semantic segmentation for autonomous vehicles
- Implementing adversarial attacks and defenses on CNNs
- Social Media User Analysis using GCNs
- Fake News Detection on LIAR-Plus dataset
- Reproducing StackGAN: Text to Photo-realistic Image Synthesis