

Apoorva Verma

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EDUCATION

Indian Institute of Technology (IIT), Roorkee

B.Tech in Electronics and Communication Engineering

CGPA: 9.152 / 10

Nov. 2020 – May 2024

EXPERIENCE

Research Intern

Université Laval

Aug 2023 – Dec 2023

Advisor: Prof. Christian Gagné

- Devised an FT-based style transfer method for TTA algorithms on segmentation tasks for autonomous driving.

Mitacs GRI Intern

Université Laval

May 2023 – Jul. 2023

Advisor: Prof. Christian Gagné

- Proposed a pseudo-label denoising pipeline using diffusion models for domain generalization tasks under shift.

Research Intern

University of York

Oct. 2022 – Jan. 2023

Advisor: Prof. Patrik Huber

- Explored implicit surface reconstruction techniques with unknown camera parameters for novel-view synthesis.

Research Intern

Vision and AI Lab, IISc Bangalore

May 2022 – Sep. 2022

Advisor: Prof. R. Venkatesh Babu

- Worked on optimizing non-decomposable objectives for class-imbalanced semi-supervised learning.

PREPRINTS

[Re] **Distilling Knowledge via Knowledge Review**

[arXiv] [GitHub]

PROJECTS

Speed Estimation using Monocular Camera

Jan. 2024 – Present

- Developing a camera-based distance and speed estimation method for low-cost two-wheeler ADAS.

Adobe's Behaviour Simulation Challenge

Nov. 2023 – Dec. 2023

- Formulated a multimodal pipeline for behaviour simulation and content generation on Twitter data.

Oriented Object Detection using Equivariant Detectors

Jan. 2023 – Apr. 2023

- Designed a two-stage pipeline with rotation-equivariant features for oriented object detection in satellite imagery.

Bosch's Model Extraction Attack For Video Classification

Feb. 2022 – Apr. 2022

- Implemented a novel strategy based on data-free model extraction attacks for video classification models.

ACHIEVEMENTS

Silver Medal (Behaviour Simulation Challenge) Inter-IIT Tech Meet 12.0

Gold Medal (Model Extraction Attack For Video Classification) Inter-IIT Tech Meet 10.0

Merit Certificate (National Top 1%) National Standard Examination in Chemistry (2019)

KVPY Fellow (All India Rank 163) Kishore Vaigyanik Protsahan Yojana (2019)

NTS Scholar National Talent Search Scheme (2018)

TECHNICAL SKILLS

Languages: Python, C/C++, SQL

Frameworks: PyTorch, NumPy, Pandas, Matplotlib, OpenCV, Scikit-Learn

Developer Tools: Git, Docker, Slurm, L^AT_EX

Courses (Online): Deep Learning for Computer Vision, Database Management Systems, Operating Systems

Courses (Offline): Time Series Data Analysis, Machine Learning, Data Mining, Probability and Statistics