

ANIMESH GUPTA

✉ animeshgupta.thapar@gmail.com | 🌐 animesh-007 | 💻 animesh-007.github.io

EDUCATION

University of Central Florida

PhD in Computer Science

Orlando, USA

August 2024 – Present

Thapar Institute of Engineering & Technology

Bachelor's in Electronics and Computer Engineering

Patiala, India

August 2019 – July 2023

PUBLICATIONS

1. Data-Efficient Training of CNNs and Transformers with Coresets: A Stability Perspective [[code](#), [pdf](#)]
Animesh Gupta, Irtiza Hasan, Dilip K. Prasad, Deepak Gupta
Under Review
2. RCV2023 Challenges: Benchmarking Model Training and Inference for Resource-Constrained Deep Learning [[pdf](#)]
Multiple authors
ICCV Workshop 2023
3. Beyond the Imitation Game: Quantifying and extrapolating the capabilities of language models [[code](#), [pdf](#)]
Multiple authors (Task contribution: Dataset collection and LLM evaluation, Task in paper: Crash Blossom)
TMLR 2023
4. Adaptive Fine-Grained Sketch-Based Image Retrieval [[code](#), [pdf](#)]
Ayan Kumar Bhunia, Aneeshan Sain, Parth Hiren Shah, **Animesh Gupta**, Pinaki Nath Chowdhury, Tao Xiang, Yi-Zhe Song
ECCV 2022

INTERNSHIPS

MVisionAI

Machine Learning Engineer Intern

Helsinki, Finland

February 2023 – Present

- Working on easing treatment plan for radiotherapy using Image Registration. Radiotherapy involves multiple imaging modalities, e.g. full-field-of-view Computed Tomography (CT) scans is used for planning and Magnetic Resonance Imaging (MRI) scans is used for tumour segmentation.
- Created an efficient library to facilitate multiple datasets and state-of-the-art algorithms.
- Adapted RWCNet and Transmorph codebases to reproduce the results of the OASIS and NLST datasets. Formed baseline for the AbdomenCTCT and NLST datasets.

UiT Norway

Research Intern

Tromsø, Norway

May 2022 – November 2022

Supervisors: Dr. Deepak Gupta, Dr. Irtiza Hasan, and Dr. Dilip Prasad

- Created a systematic benchmarking setup for different coreset methods on multiple CNNs and Transformers.
- Demonstrated that the conventional concept of uniform subset sampling across the various classes of the data is not the appropriate choice.
- The findings of the internship led to a research publication, currently under review at a Machine Learning Journal.

NVIDIA

Research Intern

India

March 2022 – May 2022

- Experimented with latest Real-Time Lane Detection work and vision transformers for an improved solution for [DRIVE-Perceptron](#) platform with faster inference and performance.

SketchX Lab, University of Surrey

Research Intern

London, England

July 2021 – March 2022

Supervisor: Dr. Yi-Zhe Song

- Worked on Fine-Grained Sketch Based Image Retrieval and Category-Level Sketch Based Image Retrieval.
- Contributed to the paper which created an adaptive Fine-Grained Sketch-Based Image Retrieval model. It adapts to new categories or different sketching patterns at test time, published in **ECCV 2022**.

GirlScript Summer of Code

Intern

India

March 2021 – June 2021

- [Face-X](#): Added NasNet and Xception model architecture for Face Recognition. [[PRs](#)]
- [Comet.Box](#): Added YOLOv5 example for the object detection. [[PRs](#)]

Minus Zero

Research Engineer

India

October 2020 – March 2021

- Worked on the Road Segmentation problem for autonomous cars in India.
- Used FCHardNet as base architecture and trained on the *Indian driving dataset* (10k images and 34 classes).

ACHIEVEMENTS

- Ranked 3 in CVPR Demo Track Event 2022 conducted by HuggingFace. 2022
- Received Grant worth \$500 by Weights & Biases for ML Reproducibility Challenge, Spring 2021 2021
- Got selected for Prairie/MAI Summer School 2021, INRIA, France. 2021
- Got selected for Gaussian Process Summer School 2020, Sheffield University, UK. 2020
- Won Bronze Medal for Kaggle Notebook in I'm Something of a Painter Myself challenge. 2020
- Top 42% in Google Landmark Recognition Challenge. 2020
- Top 6.5% in JEE Mains 2019. 2019

RELEVANT COURSEWORK

- Linear Algebra (*Gilbert Strang's 18.06*)
- CS231n: Deep Learning for Computer Vision
- Machine Learning ([Coursera Certificate](#))
- Neural Networks and Deep Learning ([Coursera Certificate](#))

PROFESSIONAL ACTIVITIES

- Conducted Workshop RCV at ICCV 2023, [Resource Efficient Deep Learning for Computer Vision](#)
- Undergraduate Teaching Assistant, [NVIDIA DLI WS-Building Conversational AI Applications](#)
- Volunteered in ICLR 2021.
- [OpenMined](#) Community Navigator.

TECHNICAL SKILLS

- **Languages:** Python
- **Frameworks:** PyTorch
- **DevOps:** Docker, Weights & Biases