

ARYAN GARG



<https://aryan-garg.github.io>

EDUCATION

Indian Institute of Technology, Mandi

Bachelor's of Technology in Computer Science and Engineering

Aug 2019 - June 2023

CGPA: 8.39/10

PUBLICATIONS

- [**Notable ICLR** Tiny Paper '24] *GPECNet: Generalizable Pedestrian Prediction System*. **Aryan Garg**, Renu Rameshan. || Paper
- [**Notable ICLR** Tiny Paper '24] *Parameter & Data-Efficient Spectral StyleDCGAN*. **Aryan Garg**. || Paper
- [Semaine numériQC, 2023] *Re-envisioning Sky Models*. Ian J. Maquignaz, Lucas Valença, **Aryan Garg**, Yannick Hold-Geoffroy, Julien Philip, JF Lalonde. || 3rd Best Presenter Award: Post || Paper-link ||
- [Symposium IA Montréal, 2022] *DeepSky*. Ian J. Maquignaz, **Aryan Garg**, Yannick Hold Geoffroy, Julien Philip, Jean Francois Lalonde. || Abstract || Poster

ACADEMIC EXPERIENCE

Bosch AI Fellow - RBCDSAI + CILAB, IIT Madras

Jun '23 - Present

Advisor: Professor Kaushik Mitra

- **Aryan Garg**, Kaushik Mitra. *Stereo Knowledge Distillation to Dual pixels using dpMV for Light Field Video Reconstruction* Under review: **ICCP 2024** || Paper

MITACS Research Intern - LVSN, Université Laval + Adobe, Canada

Jun '22 - Apr '23

Advisor: Professor Jean-Francois Lalonde & Dr. Yannick Hold-Geoffroy (Adobe)

- 2 Publications and 1 Poster, in collaboration with Adobe Canada: Deep generative models for emulating photorealistic skies.

Research Assistant - IIT Mandi

Feb' 21 - Jun' 22

Advisor: Professor Renu Rameshan

- State-of-the-art FDE on Pedestrian Trajectory Prediction Task. Now **ICLR Proceeding 2024**: GPECNet

ACADEMIC SERVICES

Reviewer Services

- (ICVGIP) 14th Indian Conference on Computer Vision, Graphics and Image Processing, 2023
- (ICLR) International Conference on Learning Representations Tiny Papers, 2024
- (CVPR-W) Computer Vision and Pattern Recognition - Workshop: AI for Content Creation, AI4CC 2024

Teaching Assistantships

- CS208 - Mathematical Foundations of Computer Science (Prof. Samar Agnihotri) - Fall '21 IIT Mandi
- EE522 - Matrix Theory for Engineers (Prof. Renu Rameshan) - Fall '21 IIT Mandi
- National (NPTEL) Course - EE5719 Deep Learning for Imaging (Prof. Kaushik Mitra) - Fall '23 IIT Madras

INDUSTRIAL EXPERIENCE

Mennr - Connecticut, USA (Remote)

Jul, 2023 - Jan, 2024

Co-Founder

- Developing un-learnable autonomous AI agents at Mennr to transform the educational sphere.

Ciena - India

Jun 14, 2021 - Aug 31, 2021

Software Developer Engineer Intern - Manager: Mr. Rajesh Bang

- Created a Django-React-REST+Redux Web-App for Auditing Layer 2 and 3 Network Devices.
- Proposed & implemented a concurrent algorithm to connect DUTs reducing existing up times by **32%**.
- Created a DevOps (Jenkins) pipeline for network devices' development & testing.

PROJECTS

DINO-DETR for Pedestrian Detection on IIT Delhi Campus Pedestrian Detection Dataset

Dataset courtesy: Professor Chetan Arora and Dr. Ramya Hebbalaguppe

- Code || Dataset hosted on Kaggle

Supervised Dual Pixel to Disparity Estimation

- Reserved for CVPRW '24 - Task enabled by DPSV dataset solved during CVPR submission: paper
- Code || DPSV dataset will be released upon publication.

Replicating 9 Seminal GANs from scratch

- Code || Technical-report || Presentation

Fast Facial Expression Recognition on Imbalanced Low Resolution Scraped Gray Faces

Dataset courtesy: Dr. Moi Hoon Yap, Manchester Metropolitan University

- Code || Dataset NA

AutoNotebook-GPT

Developed in the initial days of start-up: Mennr

- An AutoGPT instance on Colab with a programmable search engine || code

Image Forgery Detection of copy-move and sliced alterations

Dataset Courtesy: SpoofSense.ai, private limited, India

- Code || SpoofSense Raw Unprocessed Dataset

Interactive Socio-Technical Course Project at IIT Mandi

- Developed a web solution for the government's educational resource allocation in the Himalayas. || code

PAPER REPLICATION PROJECTS

Supervised Contrastive Learning and AutoAugment

code

Goal Directed Pedestrian Prediction (Rehder ICCV '15)

code

KAGGLE

Kaggle Notebooks Expert (1 silver, 4 bronze): Top-3 Notebooks

- DeepLabV3+ on Ash Images for Contrails || *Silver* Medal: 28 Upvotes || Notebook

- Understanding DICOM & pydicom for ML || *Bronze* medal: 19 Upvotes || Notebook
- PyTorch Lightning + W&B: A General Framework + CycleGAN || *Bronze* Medal: 11 Upvotes || Notebook

POSITIONS OF RESPONSIBILITY

1. Guidance & Counselling Service (GCS) Mentor, IIT Mandi: Mentored 9 juniors
2. National Service Scheme - Volunteer for social welfare in the pristine Himalayan province of Himachal Pradesh