

# ARYAN GARG



## EDUCATION

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**Indian Institute of Technology, Mandi**  
Bachelor's of Technology in Computer Science and Engineering

Aug 2019 - June 2023  
CGPA: 8.39/10

## PUBLICATIONS

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1. **Aryan Garg**, Renu Rameshan. *GPECNet: Generalizable Pedestrian Prediction System*. **ICLR Tiny Papers 2024**. || arXiv || citations: 1 ||
2. **Aryan Garg**. *Parameter and Data-Efficient Spectral StyleDCGAN*. **ICLR Tiny Papers 2024**. || Paper
3. Ian J. Maquignaz, Lucas Valença, **Aryan Garg**, Yannick Hold-Geoffroy, Julien Philip, JF Lalonde. *Re-envisioning Sky Models*. **Semaine numériQC, 2023**. || 3rd Best Presenter Award: Post || Paper-link ||
4. Ian J. Maquignaz, **Aryan Garg**, Yannick Hold Geoffroy, Julien Philip, Jean Francois Lalonde. *DeepSky*. **Symposium IA Montréal, 2022**. || Abstract || Poster

## ACADEMIC EXPERIENCE

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**Bosch AI Fellow - RBCDSAI + CILAB, IIT Madras**  
*Advisor: Professor Kaushik Mitra*

Jun '23 - Present

- **Aryan Garg**, Kaushik Mitra. *DPMV: Dual Pixel Multi-View Dataset for knowledge distillation, disparity estimation & light field video reconstruction*. **Under review: ECCV 2024** || Paper
- 4K HDR restoration using single photon camera guidance. In collaboration with Professor Mohit Gupta, University Wisconsin-Madison.

**MITACS Research Intern - LVSN, Université Laval + Adobe, Canada**  
*Advisor: Professor Jean-Francois Lalonde & Dr. Yannick Hold-Geoffroy (Adobe)*

Jun '22 - Apr '23

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

**Research Assistant - IIT Mandi**  
*Advisor: Professor Renu Rameshan*

Feb' 21 - Jun' 22

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

## ACADEMIC SERVICES

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### 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

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### **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

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### **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

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### **Supervised Contrastive Learning and AutoAugment**

code

### **Goal Directed Pedestrian Prediction (Rehder ICCV '15)**

code

## KAGGLE

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### **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**

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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