

# ANIMESH GUPTA

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## EXPERIENCE

### Minus Zero

Research Engineer (Part-time)

Patiala, India

Oct. 2020 – Mar. 2021

- Worked on the road segmentation problem.
- Used FChardnet as base architecture and trained on the *Indian driving dataset*.
- Worked on creating and preprocessing the initial dataset.
- Modified and improved the base architecture to make it work according to our use-case.

### Indian Institute of Information Technology

Research Intern

Allahabad, India

Nov. 2020 – Jan. 2021

- Explored scene text detection problem.
- Doing literature review showed that unlike existing text detection approaches, arbitrary shape text detection in natural scenes is an extremely challenging task.
- Worked with the state of the art model Textfusernet. Experimented with DCT (direct cosine transform) compressed images and then finetuned the model on the compressed images.

## EDUCATION

### Thapar University

Bachelor's in Electronics and Computer Engineering

CGPA: 8.0/10

Patiala, India

Aug. 2019 – June 2023 (expected)

## PUBLICATIONS

1. Double-Hard Debias: Tailoring Word Embeddings for Gender Bias Mitigation [[code](#), [pdf](#)]  
H. Aekula, S. Garg, A. Gupta  
*ML Reproducibility Challenge 2020*

## ACHIEVEMENTS

- Top 6.5% in JEE Mains 2019

## OPEN SOURCE CONTRIBUTIONS

### pyprobml

- Added new figures in python for Kevin Murphy's book "*Probabilistic Machine Learning: An Introduction*". [[PRs](#)]

### OpenStreetMap-iD

- To make new geo-locations accessible to new mappers added several new presets. [[PRs](#)]

### CircuitVerse

- Added improvements (like modals, dark mode bugs) for enhancing the use of GUI interface. [[PRs](#)]

### Face-X

- Added NasNet and Xception model architecture for the face recognition. [[PRs](#)]

### CoinShift-Imaging-Box

- Added YOLOv5 example for the object detection. [[PRs](#)]

### d2l-study-group

- Maintainer of the study group with daily discussions with the students of our college on the book "*Dive into deep learning*". [[PRs](#)]

### DSC (Thapar University OfficialWebsite)

- Improved repository readability for new user navigation. [[PRs](#)]

### Mini-Conf

- Virtual conference toolkit. Added video links and issue tracker bots. [[PRs](#)]

## PROJECTS

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### Google Landmark Recognition 2020

- Developed a classification model for predicting landmark labels using the GLDv2 dataset.
- Improved accuracy of the Google DELG model by optimizing the hyperparameters. [\[Link\]](#)

### I'm Something of a Painter Myself (Kaggle Challenge)

- Developed a GAN that generates 7,000 to 10,000 Monet-style images.
- Won Bronze medal for the notebook. [\[Link\]](#)

### AI for Blind (College Hackathon)

- Developed a classification model for predicting seven emotions (angry, disgusted, fearful, happy, neutral, sad, and surprised) using the FER-2013 dataset. [\[Link\]](#)

## TECHNICAL SKILLS

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- **Languages:** Python, C, C++
- **Frameworks:** PyTorch, TensorFlow, TensorFlow.js, ml5.js
- **DevOps:** Docker, Heroku, FloydHub, Weights & Biases

## RELEVANT COURSEWORK

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- **Mathematics:** Linear algebra (*Gilbert Strang's 18.06*)
- **Courses:** Machine Learning ([Coursera Certificate](#)), Neural Networks and Deep Learning ([Coursera Certificate](#))