ANIMESH GUPTA

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EXPERIENCE

Minus Zero *Patiala, India*
Research Engineer (Part-time) *Oct. 2020 – Present*

- 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 *Allahabad, India*
Research Intern *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 Textfusenet. Experimented with DCT (direct cosine transform) compressed images and then finetuned the model on the compressed images.

EDUCATION

Thapar University *Patiala, India*
Bachelor's in Electronics and Computer Engineering *Aug. 2019 – June 2023 (expected)*
CGPA: 8.0/10

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

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

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

RELEVANT COURSEWORK

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