Pramay Singhvi

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Education

Birla Institute of Technology and Science, Pilani

B.E Electrical and Electronics Engineering *Aug. 2016 - May 2021*

M.Sc Chemistry *Aug. 2016 - May 2021*

Technical Skills

Languages: Python, C/C++, Java
Tools/Frameworks: TensorFlow/Keras, PyTorch, GIT, MATLAB, FLASK
General: Machine learning, Data Structures and Algorithms, Object Oriented Programming

Experience

Video Analytics Lab, IISC - Research Intern Dec 2020 – Present

- Domain Adaptation

Vimaan Robotics - Deep Learning Intern Apr 2020 – June 2020

- Developed a **multi-line text detector** by enhancing the existing EAST model.
- Achieved a **0.95 mAP score** on the in-house data.
- Built a **Barcode Recognition** network from scratch using CNN
- Achieved a **95% accuracy** on a simulated dataset.

Vimaan Robotics - Deep Learning Intern May 2019 – Jul 2019

- Built a **Faster RCNN Object Detection model** in TensorFlow.
- Model development led to speed gain of **25X** while achieving marginal gains in the accuracy levels.
- Improved the inference speed of existing MaskRCNN pipeline.
- Initiated training and benchmarking available OCR models on the in-house data.

North Eastern Space Application Centre - Research Intern May 2018 – July 2018

- Trained and deployed an object detection model on web using FLASK.

Projects

News Classification using Weighted RNN

- Used Weighted-RNN architecture for news classification.
- Experimented with **LSTM and GRU cells in RNN and word2vec and Glove embeddings.**
- Achieved best accuracy **87.69%** with **Glove embeddings and LSTM cells**
- Project Link

Auto Labelling Tool

- Contributed to an open source project - Anno-Mage tool. Made it compatible to different object detection models in TensorFlow/Keras and enhanced its GUI
- Pull Request Link

Retrosynthesis Reaction Prediction

- Built a **retro-synthesis reaction prediction model** using **OpenNMT.**
- Used **SMILES based data augmentation** which gave a **9% accuracy boost**.
- Deployed the model on the web using **FLASK**.
- Project Link

Certifications

Deep Learning Specialization - Coursera

Achievements

Semi Finalists - Flipkart GRiD Te[a]ch The Machines 2019