TUSHAR MITTAL

chiragmittal.mittal@gmail.com
https://techytushar.github.io
+91 7017192931
7/29B, Tilak Nagar, Kanpur, India
techy_tushar
tusharmit
techytushar

Machine Learning Engineer

Skills

PROGRAMMING LANGUAGES

Python
JavaScript
C/C++
Shell

TECHNOLOGIES

TensorFlow
Numpy
Pandas
OpenCV
Scikit Learn
Keras
Docker
GraphQL
jQuery
Linux
Selenium
Django
Flask
Git
NLTK
Spacy
Bokeh
SQL
Apache Spark

LANGUAGES

English
Hindi

Achievements

Selected to attend GSoC Mentor Summit in Germany

Kaggle Discussion Expert

Runner Up at HCL AI Hackathon

Finalist at Smart India Hackathon 2019

Selected as Mentor at Hack in the North (IIIT Allahabad) and Hack on Hills (NIT Hamirpur)

Contributed to Open Source Projects such as: Pandas, FOSSASIA, AboutCode, CloudCV

Employment

Precily
Data Science Intern (NLP) — Jan. 2020 to Apr. 2020

- Worked on various Semi-supervised and Unsupervised techniques for clustering of legal documents
- Implemented new models by reading research papers and made modifications to already implemented models.
- Worked with legal domain experts to understand, clean and model the legal text data.
- Technologies Used: Python, TensorFlow, Scikit Learn, Pandas, SQL

Google Summer of Code Intern — Remote
SPDX — Apr. 2018 to Aug. 2018

- The project was to build an online XML editor which can be used to create and edit the SPDX Licenses.
- It also included features such as making a pull request on GitHub, beautifying XML code, generating diff and validating it against the XML schema.
- Technologies Used: Django, SQL, JQuery, JavaScript, CSS, HTML

Projects

Abstractive Text Summarization

- Used the Transformer model to generate summary on CNN-DM dataset.
- Implemented some concepts from scratch and gained decent ROUGE score.
- Technologies used: TensorFlow 2.0, Numpy, Pandas, NLTK, Gensim

Image Caption Generator

- Trained a deep learning model on the Flicker 8k dataset, to generate caption for an image.
- The model had an encoder-decoder architecture with LSTM, embedding, convolution and dense layers.
- Technologies used: TensorFlow, Keras, Numpy, Scikit Learn, PIL, NLTK

Dog Images Generation using GANs

- Trained DCGAN and WGAN model on the Stanford Dogs Dataset to generate new images of dogs.
- Technologies used: Python, PIL, Numpy, Keras, TensorFlow

Tabular Data Augmentation using GANs

- Trained cGAN on imbalanced Fraud Detection Dataset to generate samples for minority class.
- Slight improvement in accuracy and recall when model trained using generated data.
- Technologies used: TensorFlow 2.0, Pandas, Numpy, XGBoost, Matplotlib

Interpretable Machine Learning

- Implemented CAM, GradCAM and ScoreCAM algorithms to visualise parts of image that CNN focuses on.
- This helps to understand why the CNN is giving out a certain prediction.
- Technologies used: Keras, TensorFlow, Numpy

Education

Kanpur Institute Of Technology — Aug. 2016 to May 2020
Bachelor of Technology (B.Tech) Computer Science and Engineering
CGPA: 8.1/10.0

Coursera — June 2018 to Feb. 2019
Machine Learning by Andrew Ng
Deep Learning Specialization

Activities

Intel AI Student Ambassador
Intel AI Ambassador are student technology leaders, empowered to build machine learning and AI communities on their campus and share their deep knowledge with their fellow students. Organised workshops and seminars on AI related topics.

GitHub Campus Expert
GitHub Campus Experts is a community of students aimed at building technical community at their campus. Completed training modules provided by GitHub. Organized event, workshops and meetups at various colleges.

Volunteering

Google Code-In Mentor · TensorFlow & CloudCV
Implementing new features, suggesting improvements and fixing bugs in the projects.
Helping the school students to contribute to the project and reviewing their work.
Technologies Used: Python, TensorFlow, Keras, Numpy, Django

Kanpur Python & PyData Meetup · Organizer — Current
Kanpur
Giving talks on topics related to Python, Data Science, Machine Learning and various frameworks in Python. Helping people with their doubts and bugs, and building a community of people who love to code and are eager to learn.