

# Abhishek Prajapat

B.Tech. Student

A passionate and energetic learner of Data Science with experience in Model building and data analysis. A quick learner with excellent multi-tasking skills. Worked in the team as well as on individual projects. Diligent and determined towards any task taken up. Strong problem-solving skills with a logical and optimistic approach. Fluent in English and Hindi with good communication skills

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## EDUCATION

### Computer Science

Thapar Institute of Engineering and Technology

08/2018 - Present

7.5

## INTERNSHIPS

### Machine Learning Intern UNCCD

12/2020 - 03/2021

*Achievements/Tasks*

- Part of one of the 3 finalist teams. (Relevant link - <https://www.geo-ldn.org/finalists>)
- Worked under international mentors including distinguished members from India, South Korea, and France.
- Developed 4 different fully functional programs for the extraction of data from various sources and a segmentation model predicting Land Degradation in the coming years using EVI, surface temperature, protrusion coefficient, wind velocity, wind direction data.
- Released as a downloadable QGIS plugin post project completion for the benefit of the larger community.

## RESEARCH PROJECTS

### Next-Word Generation

~ This project was done for the Punjabi Language. In this project, if a user enters a word then, the aim was to predict 5 possible next words from which the user can choose.

~ Responsible for the modeling part of the next word generation system using LSTMs and Word Embeddings.

### Plant Disease Infection Detection

~ Given an image of a field composed of several plants, the aim was to identify what is the level of infection in the image.

~ Responsible for applying image pre-processing and segmentation as well as some parts of model building.

## SKILLS

Python, C++

Linux

TensorFlow, PyTorch, Sklearn

MySQL

Git

Docker

## PERSONAL PROJECTS

### SIIM-FISABIO-RSNA COVID-19 Detection (06/2021 - 07/2021)

- Given a study of a patient you had to identify which abnormality does that patient as if he has one. Also, given the Dicom files of chest radiography of the patients, the aim was to detect and localize the points of abnormality. A single patient could have multiple abnormalities.
- Multi-Label Classification 5-fold valid ROC - 0.7951
- Abnormality Localization/Detection mAP@.5 - 0.4715

### Casava Leaf Disease Classification (06/2021 - 06/2021)

- Multi-class classification problem where given a plant image, the aim was to identify if it is infected or not, and if it is infected then the kind of infection.
- Multi-class classification test-set ROC - 0.958
- Models used - ResNet, Vision-Transformers, EfficientNet.

### Quora Question Pair Similarity Analysis

- Given a pair of question the aim was to identify if they have same semantic meaning or not.
- Best Valid ROC - 0.8959 on Siamese Architecture.

### Toxic Comment Classification

- Given a text the aim was to identify if that text contains any form of toxicity.
- Best Valid ROC - 0.94 using LSTMs.

### Mechanism of Action for drug detection

- Given a row with float values on genetic and cellular data the aim was to infer which of the possible 207 labels representing a drug compound it contains.
- Our public validation loss - 0.0192 and the best was 0.0179

### RIID Answer Correctness Prediction

- Given a dataset on students and their performance over a set of exams the aim was to predict if the student correctly answers a question or not.
- Achieved ROC score - 0.7068

## CERTIFICATES

Applied Data Science with Python Specialization, Coursera  
(07/2020 - Present)

Deep Learning Specialization, Coursera (08/2020 - Present)

DeepLearning.AI TensorFlow Developer, Coursera  
(09/2020 - Present)