

Shubham Kaushal
IIT Bombay '21

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Education

Indian Institute of Technology, Bombay 2017-2021
B.Tech. | Aerospace Engineering

Technical Skills

Machine Learning: Scikit-Learn (Python), Pandas, Matplotlib, Seaborn,
Deep Learning: TensorFlow (Keras), Neural Networks (MLP/Convolutional/Recurrent)

Projects | can be viewed on GitHub

Denoising images | CNN model 2021

Built an Autoencoder using deep CNNs, reducing the losses to one-fifth of the basic model

Evaluated various optimizers for denoising and preserving textual information in noisy images

IMDB Sentiment Analysis | LSTM 2021

Built an LSTM network to classify sequential data (reviews) into positive/negative sentiment

Achieved 89% accuracy with both the LSTM network and MLP model using large matrices

MNIST handwritten image classifier | Supervised Learning 2021

Achieved 96.7% accuracy, improved to 97.8% using data augmentation and model stacking

Investigated errors using correlation matrix and implemented ways to improve the predictions

Astronomical Data Analysis | BB Leo Jan, 2021 - May, 2021

Analyzing gigabits of observation data collected from the GROWTH India Telescope

Determining variability and estimating the physical parameters using the PL curve (error<1%)

Experiences

Embedded Software Developer | Prof. Surya Durba 2018-2020

Developed a toolkit for modelling of Earth's atmosphere using archival data from IMD, Mumbai

Developed a BUFR encoder/decoder and extracted features from raw data using Python

Leadership Roles

Overall Coordinator | GRA 2019-2020

Guided 50+ volunteers in camps to understand the grassroot issues and policies in rural India

Supervised sessions with social reformers like Anna Hazare, Popatrao Pawar, and many others

Convener | GRA 2018-2019

Curated activities for camps to understand the ground realities in villages across rural India

Developed website to increase GRA's reach and to keep track of previous activities and reports