

# SUMANTRAK MUKHERJEE

**BITS Pilani, Pilani**

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## EXPERIENCE

### Web Development

#### Anand Group

November 2019 – January 2020 Pune, Maharashtra

- Developed a fully functional regular, responsive dashboard.
- Technology used for backend: Node.js, MongoDB, Express.
- Technology used for frontend: HTML, CSS, Bootstrap, JQuery, Javascript.

## PROJECTS

### Detection of mask on Face

#### Self-Learning Project

October 2019 – November 2019

- Deep Learning + OpenCV to detect faces in an image or video stream and classify on the basis of presence or absence of mask.
- Used VGG model for image encoder.
- Trained on custom data set.

### Hate Speech and Self Harm Detection on BITS Confessions Page Data

#### Exploratory Project

June 2020 – July 2020

- A dataset was created by scrapping data from the BITS Pilani Confessions Page on Facebook.
- Created embeddings for the dataset using BERT. Trained a Neural Net with CNNs (for context), ReLu (for non linearity), Max Pooling and Dropout to prevent over-fitting, Softmax (for multi-label classification)

### Reinforcement Learning for Playing Chess

#### Exploratory Project

August 2020 – September 2020

- Developed a RL model to learn to play chess using.
- Policy Iterations
- Model free Learning
- Policy Gradient

## EDUCATION

### B.E.(Hons) in Electronics and Instrumentation

#### BITS Pilani, Pilani

July 2019 – Present CGPA: 7.16

### Class XII

#### Akshara International School, Pune

June 2019 95.00%

### Class X

#### Loyola School, Jamshedpur

June 2017 92.00%

## SKILLS

C/C++ Python Javascript Django  
SQL Node.js MongoDB Express  
HTML CSS Bootstrap SQL  
Machine Learning OpenCV Git  
Tensorflow Keras Scikit-Learn  
Pytorch LaTeX Matplotlib numpy  
scipy

## POSITION OF RESPONSIBILITY

### SIG Team Lead for ML/AI

#### BITS-ACM

August 2020 – Present

- The ML/AI Team aims to promote ML/AI on campus through hand holding for beginners and hands on experience through Open Source projects and regular reading groups
- As a team of 12 we have explored Reinforcement Learning, Unsupervised and Semi Supervised Learning, Code Mixing in NLP. Currently there are 2 ongoing projects.

## ACHIEVEMENTS

- 335/450 in BITSAT 2019
- 98.91 percentile in JEE Main 2019 of 1.1 million candidates