#### MANMOHAN DOGRA

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#### **Academics**

| Degree                                   | Concentration           | Pass-Out<br>Year | Board/University        | Institution                            | Score   |
|--|-------------------------|------------------|-------------------------|--|---------|
| Bachelor of<br>Engineerin<br>g (4 years) | Computer<br>Engineering | 2021             | University of<br>Mumbai | St. Francis Institute<br>Of Technology | 8.63/10 |
| HSC                                      | General                 | 2017             | C.B.S.E                 | Kendriya Vidyalaya<br>Jyotipuram       | 79.3%   |

**Undergraduate Coursework-** Machine Learning, Artificial intelligence and Soft Computing, Big Data Analytics, Python, Java, C, Web Designing, Digital Signal, and Image Processing, Database Management System, Advanced Algorithms, Data Warehousing and Mining, Cryptography, Computer Graphics, Microprocessor, Software Engineering, Java, Python, Structured Programming Architecture.

### **Internships**

### • Machine Learning Intern at 'Cenaura Technologies', Mumbai

Jun 2020 - Present

- Developing an automated 'Hydroponic Farming' system for lettuce to grow efficiently under a simulated environment using computer vision for disease detection, developed a fuzzy system for disease health grading, and yield estimation using deep learning. Worked on an R&D project for Pre-COVID Estimation to analyze the possibility of the COVID (in percentage) using body temperature, oxygen saturation, and breath pattern to create an auxiliary mask.
- Technology / Tools: ML, Computer Vision, Django, Fuzzy Inference System, Reinforced Learning.

# • Machine Learning Intern at 'Therex Technologies', Mumbai

Nov 2019 - Jun 2020

- Worked on Human-AI hybrid technology: HITL (Human In The Loop) and CC (Cognitive Computing). Created an AI module 'Denoiser' using DL to detect and reduce the specific noise present in the audio.
- **Technology** / **Tools:** Deep Learning, Kafka, Spark, Cassandra, Python3.

#### Machine Learning Intern at 'Blocklogy Edutech', Mumbai

Nov 2019 - Jun 2020

- Created a **Live-Face Recognition** module for authentication of users for the transaction of money on the corporation portal. Developed an **Agricultural Chatbot** to help the farmers with real-life problems such as enhancing the production, providing suitable suggestions for growing crops, educating them with their rights. Created a Job Recommender System based on the skills present on a resume
- **Technology** / **Tools:** Computer-Vision, Open-CV, Rasa-Core, Rasa-NLU, Tensorflow, Python3.

## **Academic Projects**

## • Disaster Management

projects at the National level.

Feb 2020 - Jun 2020

Developed real-time **Crisis Management**, precautions serving web applications to help the people during a disaster using disaster classifier, displayed details about the disaster-effects, safe-practices, and provided nearby healthcare center details, safe locations, One-click-SOS help.

**Technology** / **Tools:** ML, python, selenium, web scraping, HTML- CSS, Django, Google-Places API **Output:** Created moral and reliable application, ranked 1st in the internal Hackathon and ranked in the top 5

### • Speech Recognition Module for Voice Assistance

Jan 2020 - May 2020

Developed and deployed a framework for speech recognition module to convert speech into text using CNNs. Implemented and hyper tuned the model to increase its recognitional performance by 5% approximately.

Technology / Tools: Deep Learning, Convolution Neural Networks, TensorFlow, HTML5, CSS3, JS, Flask.

**Output:** Successful speech to text conversion with an accuracy of 86.4%

#### **Independent Projects**

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### Lyrics Generator

Apr 2020 - May 2020

Created Lyrics Generator to create song lyrics for a given set of input words, using the NLP, LSTM model in Tensorflow, achieved an accuracy of 84.6%.

Cat Breed Classifier

Mar 2020 - Apr 2020

Developed a **multi-class cat breed** classifier to detect the breed of a cat as a result of image input, using the essentials of CNN in Tensorflow acquired an accuracy of 94.6%.

NR-USD Time Series Analysis

Mar 2019 - Apr 2019

Performed time series analysis on Indian currency (INR) value compared to USD using Sequence modeling and LSTM in Tensorflow with an overall MAE of 0.35.

My other projects on machine learning, deep learning, and web development, can be viewed on my GitHub: <a href="https://github.com/immohann/">https://github.com/immohann/</a>

#### **Publications and Achievements/Certificates**

- The research paper titled 'Automated identification of disaster news using machine learning and natural language processing' published through IEEE conference having DOI:10.1109/ICESC48915.2020.9156031
- The research paper titled 'Noise Reduction from Audio using CNN and Denoiser' accepted by the SPRINGER publication, presented at the FRSM conference by NIT Silchar.
- Ongoing research work includes papers titled: 'Lyrics Inducer using LSTM Networks', 'Fractal based speech emotion detection using CNN', 'Fuzzy Inference System for Early Prediction of Covid', 'Tensorflow based Story Plot Recommender using LSTM network'.
- Deep Learning Specialization Certificate (deeplearning.ai) Coursera -2020
- Tensorflow in Practice Professional Certificate (deeplearning.ai) Coursera-2020
- Machine Learning Course Certificate(Stanford University) Coursera-2019
- Data structures and algorithms ELITE Certificate (IIT Madras) NPTEL-2019
- Earned certificate of instructing for Frontend Developer workshop 2018-2019
- Received a 100% scholarship from AICTE(a government organization) for my undergraduate 2017
- Ranked in top 10 percentile for AIPT(Indian Association of Physics Teachers) competition, organized in 121 schools on a national level (K.V.Jyotipuram) AIPT-2016

## Leadership

- **Technical head**, Computer Society of India (**CSI**) SFIT (2019-20) managed the team to conduct technical events, competitive coding competitions.
- **Mosaic Event Organizer,** Technocrats SFIT (2018-19) organized a technical event for two days fest, managed event publicity, and game workflow with my team support.
- **Co-lead** at 'We can we will' social service firm (Jul 2019- Dec 2019) taught children (5-12 years old) at designated centers, and managed the new volunteers in the firm.

# **Extramural Engagements**

- Avid **technical writer** on Medium, technical blogs can be seen at (medium.com@immohann).
- Volleyball-club **captain** for the academic year 2020-21.
- Awarded with the title of **Mr. Fresher** in the academic year 2017-18.
- **Volleyball Champions**, in the leagues of 12 teams organized at the regional and national level including MIT Pune, VIT Mumbai, Father Agnel Mumbai, Thakur College Mumbai during the years 2018 to 2020.
- Contributed art to Indian Central-Industrial-Security-Force (CISF) magazine from the year 2015 to 2020.

Languages: English, French, Hindi, Punjabi, and Marathi

**Hobbies:** Space exploration, playing volleyball, sketching, watching movies, reading novels.