Mahesh Lomrar				170050050	
Computer Science & Engineering				B.Tech.	
Indian Institute of Technology, Bombay				Gender: Male	
				DOB: 04-04-1999	

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2021	⬛

SCHOLASTIC ACHIEVEMENTS

- Bagged **All India Rank 281** in **JEE Advanced** out of 160,000 candidates *('17)*
- Bagged **All India Rank 333** in **JEE Mains** out of 1.2 million *('17)*
- Completed the **AMCAT** India's largest employability test *('20)*

PROFESSIONAL EXPERIENCES

Internship at Samsung R&D Delhi *(May '20 - Jun '20)*
Text Summarizer *Mentor: Vinod Mishra*
- Worked remotely on the well-known **Transformer** model for developing the Text Summarizer in Python.
- Worked on implementation of the **LSTM encoder-decoder** Architecture with the **Attention Mechanism**.
- Worked on **NLTK** library for text cleaning, data preprocessing and trained model on Inshorts News Dataset.

KEY PROJECTS UNDERTAKEN

Self Project: IMS (Inventory Management System) *(Apr '20 - Present)*
- Designed a robust inventory management system for the marine vessels to manage the onboard spare parts.
- Implemented a two-tier user-friendly and secure software using the **Django** and the **Postgresql** as backend.
- Immense utility on **Indian Naval Ships** as it tracks and restricts user actions based on higher authorities.
- Deployment using the **Microsoft IIS Server** post **Vulnerability Assessment** and **Penetration Testing**.

Course Project: Face Recognition and Emotion Detection *(Aug '19 - Nov '19)*
Guide: Prof. Ganesh Ramakrishnan
- Built and implemented a **CNN** Keras model for face recognition & emotion detection using **sklearn** & **CV2**.
- Used **Haar Cascade** classifier for training which internally uses the **Viola-Jones Algorithm** in python.
- Achieved **Inference** time of **80ms** and **accuracy** above **81%** with three classes for face and seven of emotion.

Course Project: Email Application *(Feb '19 - Mar '19)*
Guide: Prof. Kameshwari Chebrolu
- Designed a simplified version of the **PoP3** email protocol for transfering files between the clients and server.
- Program implementation also fulfills the functionality of multiple clients connected simultaneously to server.

Course Project: Border Gateway Protocol *(Feb '19 - Apr '19)*
Guide: Prof. Ashwin Gumaste
- Constructed a **Finite State Machine** to maintain a table of all BGP peers and their operational status.
- The **Border Gateway Protocol** is involved in exchanging internet routes and reachability information.

Course Project: DPLL and DFA Implementation *(Feb '18 - Mar '18)*
Guide: Prof. Amitabha Sanyal
- Implemented the **SAT Solver** based on the infamous DPLL (Davis-Putnam-Logemann-Loveland) algorithm.
- Solved satisfiability problem using unit propagation & literal elimination by **Backtracking-search** algorithm.
- Programmed DFA (Deterministic Finite Automata) Algorithm using **LISP** in the Racket interface.
- Interface accepts regular expressions and outputs the transition graph for the given expression.

Course Project: GAP: Github based Android App *(Sep '18 - Oct '18)*
Guide: Prof. Soumen Chakrabarti
- Created an android app using the **Android Studio** to gather data from Github using curl calls.
- Used the app to access GitHub's public API to fetch information about a user's public repositories.

OTHER PROJECTS

Course Project: Sine Line: Interactive game *(Feb '18 - Apr '18)*
Guide: Prof. Amitabha Sanyal

- Designed a single-player game using **LISP** programming language in the Racket environment.
- Used the functional programming aspect of LISP to design the obstacles and background of the game.

Remote Control Bot *(Aug '17 - Oct '17)*
Guide: Electronics and Robotics Club

- Build a **manually controlled bot** with **Interfacing Bluetooth Module** and soldering on PCB.
- Capable of negotiating different kinds of obstacles in its path in a stipulated amount of time.

Self Project: Title Predictor *(July '20 - Aug '20)*
Guide: Coursera

- Build a text title predictor model using the **Tensorflow** library and Keras **Sequential model**.
- Achieved validation **accuracy** of **89.21%** and the **Inference** time of **20ms** on BBC-text dataset.

Self Project: Image Classifier *(July '20 - Aug '20)*
Guide: Coursera

- Built image classifier in **Tensorflow Keras library** and sequential model with convolutional neural network.
- Achieved the **Inference** time of **13ms** and **accuracy** of **74%** on fashion_mnist dataset from the tf_datasets.

TECHNICAL SKILLS

- **Programming Languages -** C, C++, Python, Java, Bash
- **Web Development -** Django, React, Html, CSS, PHP, Javascript
- **Machine Learning -** TensorFlow, NLTK, Scikit-Learn
- **Software -** MATLAB, Android Studio, Git, LaTeX AutoCAD

COURSES UNDERTAKEN

- **Machine Learning -** Artificial Intelligence and Machine Learning; Deep Learning; Foundations of Intelligent and Learning Agents; Convolutional Neural Networks in Tensorflow (Coursera), Introduction to TF for AI, ML, and DP (coursera), Machine Learning (Udacity), Natural Language Processing in Tensorflow (coursera)
- **Computer Networks and Security -** Foundations of Network Security and Cryptography; Introduction to Blockchains, Cryptocurrencies and Smart Contracts, Computer Networks
- **Algorithms and DS -** Data Structures and Algorithms, Algorithms on Strings (coursera), Algorithms on Graphs (coursera), Data structures (coursera), Algorithm Toolbox (coursera)
- **Maths and Statistics -** Calculus, Linear Algebra, Differential Equations, Introduction to Probability Theory, Introduction to Numerical Analysis
- **Computer Science -** Data Analysis and Interpretation, Design and Analysis of Algorithm, Logic for CS, Operating Systems, Computer Architecture, Implementation of Programming Languages, Automata Theory, Database and Information Systems

EXTRACURRICULARS

- Handled 30 organizers and guided them into working for the **Web and Tech** Department in Mood Indigo.
- Created **App and Website** services for Mood Indigo, Asia's largest college cultural festival.
- Part of the **Gold-winning** hostel team in inter hostel sophomore cross country run GC.
- Completed the **Film Editing** course in freshezza organized by SilverScreen, IIT Bombay.
- Underwent one-year yoga training under **National Sports Organization** in cricket.
- Enjoy playing football, cricket, volleyball, and watch adventure movies and tv series.