DEEPAK MEENA
Computer Science & Engineering
IIT Bombay

150050039
UG Fourth Year (B.Tech.)
Male
DOB: 26/03/1998

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2020	6.2
Intermediate/+2	R.B.S.E.	Maa bharti School	2015	87.40
Matriculation	C.B.S.E.	Central Academy School	2013	89.83

Scholastic Achievements

- In **Top 3 percentage** in **IIT JEE-Advanced** out of 0.15 million candidates *(2015)*
- Secured **99.07 percentile** in **JEE-Main** out of 1.3 million candidates *(2015)*
- Secured **89.83 Percent** in 10th Board exam in RBSE *(2013)*
- Secured **87.4 Percent** in 12th Board exam in RBSE *(2015)*

Course Projects

Academic Feedback App *Autumn 2018*
Guide: Prof. S. Sudarshan *IIT Bombay*

- Adding **feedback** functionality that promotes **Student-Instructor** interaction by allowing the students to express their views on classes, labs etc.
- Student can give feedback for the courses they have undertaken and also view the feedback of **past courses**.
- Instructor can view the feedback but **anonymity of student** is preserved.
- Project is done is Java on **Eclipse IDE** and database used is **postgresql**.

Chatting webapp WhatASap *Autumn 2018*
Guide: Prof. S. Sudarshan *IIT Bombay*

- This is a simple **WhatsApp** like chat application built on **Java servlets** and postgres.
- Support all basic fuctionalities of a chat app.
- Project is done is Java on **Eclipse IDE** and database used is **postgresql**.

LYrics Library *Autumn 2017*
Guide: Prof. Kavi Arya *Course Project*

- Designed a **web app** for storing and organizing songs lyrics.

  It has all basic features including seach by name, sort by date, filter, user login/signup, user upload and user comments
- Additionally, added support for lyrics in **Indian Local Languages** with the help of Centre for Indian Language Technology, IIT Bombay

Encryptor And Decryptor *Autumn 2018*
Guide: Prof: Supratik Chakrabatory *Course project*

- Implemented a encrypter and state machine on Spartan **FPGA** board using **VHDL**
- Engineered communication between FPGA and PC using UART, and USB using the FPGA Link library
- Software used is **Xilinx** and Language is VHDL

Compiler for Little quilt programming language *Summer 2018*
Guide: Prof. Udey Khedkar *IIT Bombay*

- Implemented a **Gcc** based compiler for **Little quilt** Language
- Compiler is done with the help of **Lex**(lexical analyzer) and **Yacc**(yet another compiler compiler).
- With this compiler we can see the resultant Matrix as well as **Abstract syntax tree** formed.

Game of life *Spring 2018*
Guide: Prof. Shivasubramanian Gopalakrishnan *Course Project*

- Implemented the serial and parallel version of **Conways Game of Life**.
- Used **OPENMP threads** in **C++** to parallelise the code.
- Analyse the performance of serial and parallel version with respect to Grid Size
- Analyse the performance of serial and parallel version with respect to number of interations. Also Analyse how performance of serial and parallel version will change with change in no. of threads

Implementation of K-means clustering *Spring 2018*
Guide: Shivaram Kalyanakrishnan *IIT Bombay*

- Implemented required libraries for **k-means clustering** and, analysed performance of various initialization methods
- Applied the libraries for image compression and decompression from pgm format files.

Implementation of Ensemble Algorithms *Spring 2018*
Guide: Shivaram Kalyanakrishnan *IIT Bombay*

- Implemented the ensemble algorithms like **adaboost** and **Bootstrap Aggregating Algorithm** in Python.
- Algorithms are used to make strong classifiers using weak classifiers Analysed adaboost and bagging performance over same data

Implementation of perceptron classifier *Spring 2018*
Guide: Shivaram Kalyanakrishnan *IIT Bombay*

- Implemented two kinds of perceptron **1v1** and **1vr** for multidimensional data
- Classifiers is then used to classify various geometric shapes with accuracy over 80 percent. Language used : Python

Polynomial Class Implementation *Autumn 2015*
Guide: Prof. Varsha Apte *IIT Bombay*

- Implemented a polynomial class in C++
- The class supported native mathematical operations like addition, multiplication and division
- Other functionalities include finding the roots and plotting, taking end values from user
- Plotting is done using the graphics borrowed from the simplecpp library

Key Courses Undertaken

Computer Science	Computer Programming and Utilization, Abstractions and Paradigms for Programming, Computer Networks, Digital Logic Design, Software Systems, Computer Architecture, Operating Systems, Database and Information Systems, Artificial Intelligence and Machine Learning, Implementation of Programming Languages Design and Analysis of Algorithms,High performance scientific Computing
Mathematics	Linear Algebra and differential calculus, Discrete Structures, Data Structures and Algorithms, Design and Analysis of Algorithms, Logic and Automata Theory, Numerical Analysis, Calculus

Technical Skills

Programming:	C++, Python,Java, C
Web Development:	HTML, CSS, JavaScript, Bootstrap,PHP
Softwares:	MATLAB, GNU Octave, Gnuplot, Inkscape, Cmake, Git,Eclipse,Xilinx

Extracurriculars

- Successfully completed a one year course under the **National Service Scheme (NSS)** IIT Bombay *(2015)*
- Represented Hostel-7 in Inter-hostel hockey championship *(2015-16)*