Vipin Dewangan **180110093**
Metallurgical Engineering and Materials Science **B.Tech**
Indian Institute of Technology Bombay **Male**

Examination	University	Institute	Year	CPI/%
Graduation	IIT Bombay	IIT Bombay	2022	6.1
Intermediate	CBSE	Sri Sankara Vidyalaya, Bhilai	2018	84.80%
Matriculation	CBSE	SSS Sector 10, Bhilai	2016	9.2

SCHOLASTIC ACHIEVEMENTS

- Recipient of **National Talent Search Examination (NTSE) Scholarship** (2016)
- Recipient of **Qualified Kishore Vaigyanik Protsahan Yojna (KVPY) Stage-1** (2016)

INTERNSHIP

Data Science and Business Analytics Internship | The Sparks Foundation (Jul 2021 - Aug 2021)

- Developing Python Scripts for data analysis on given dataset using **Seaborn** and separate them into different cluster groups using **K-means algorithm** from **Scikit-Learn**
- Implementing **Exploratory Data Analysis** on given dataset using **Seaborn** and presenting the correlation among various data parameters visually using **Matplotlib** in Python
- Created object detector for finding various objects in image using **OpenCV in Python**
- Identifying different colors and their amount in an image using **OpenCV in Python**

Software Developer Engineer Intern | Mirats Insights (Sep 2021 – Oct 2021)

- Worked on an organisational attendance web-application using **Firebase**
- Created a software which helps in categorising the data sets using **Tkinter** and **Openpyxl** in Python

KEY PROJECTS

International Robotic Challenge | Techfest, IIT Bombay (Nov'18 – Dec'18)

- Represented IIT Bombay as a part of 10-member team in IRC and competed against international teams
- Designed a mechanical gripper in SolidWorks for picking and placing objects in the track
- Created a shooter to throw dart in the dart board

RC Plane Competition | Aeromodelling Club, IIT Bombay (Sep'18 – Oct'18)

- Designed, built and tested RC flying plane on an RC trainer aircraft
- Optimized aircraft dimensions for stable flight control and maximized glide time within the provided constraints

Bluetooth Controlled Bot | Electronic and Robotic Club, IIT Bombay (Jul'18 – Aug'18)

- Built a bot which can be connected to Android supported device via Bluetooth module (HC05)
- Bluetooth module communicates with microcontroller (ATtiny) to give commands to the motor driver
- Designed the chassis for the bot and applied Differential steering mechanism for proper controls

Cozmo Clench | Techfest, IIT Bombay (Dec'18)

- Made a pick and place bot that crosses various obstacles in a track
- Designed the gripper in SolidWorks and 3D printed it using PLA material
- Controlled the bot using Arduino and l298N motor driver soldered in a perforated circuit board
- Programmed differential mechanism and gripper control of the bot in Arduino Software in C++

TECHNICAL SKILLS

Programming Skills	: C++, C#, Python, Java, R
Game Development	: Unity, Unreal Engine, Visual Studio
Software	: Arduino IDE, Windows, Linux, Keil $\mu Vision$
Environments	: AutoCAD, Photoshop, Illustrator, MS Office, R Studio, MATLAB
3D Modelling	: SolidWorks, Blender, Autodesk Maya, Autodesk Alias

SELF PROJECTS

Sentence Similarity (2021)

- Developed python script that convert textual sentence into vectors using **Nltk** and **FastText** model.
- Similarity between sentence is calculated by cosine similarity between vectors

Semantic Analysis (2021)

- Converted document into dictionary of bag of words using **Nltk** in python
- The semantic is calculated by counting the total number of positive, negative, uncertain,constraining and complex words in a document using predefined dictionaries