Ajay Sanap **193100053**
Mechanical Engineering **PG 2nd Year (M. Tech.)**
Indian Institute of Technology Bombay **Male**
DOB: 26/02/1996

Examination	University	Institute	Year	CPI / %
Post Graduation	IIT Bombay	IIT Bombay	2019	6.83
Graduation	Pune University	SCOE Pune	2018	73.36%
Intermediate	Maharashtra Board	GMD college Nashik	2014	90.31%
Matriculation	Maharashtra Board	New English School Baragaon Pimpri Nashik	2012	88.91%

ACADEMIC ACHIEVEMENTS

- Secured **99.31 percentile** in GATE in Mechanical stream *(2019)*

KEY PROJECTS

Course Project| IIT Bombay

- **Salary prediction using a skill set of an employee** *(Jan' 20-May20)*
  Guide: Prof. Amit Sethi
  - 84% accurate salary is predicted against various skill set by using techniques such as **Python**, **Scikit-learn**, **Universal Sentence Encoder**, **Tensorflow** ,**Principal Component Analysis**(PCA) and **XGBOOST** algorithm
- **Finite Difference Method for solving one dimensional PDE**
  Guide: Prof. Shyam Karagade *(May'20)*
  - Temperature distribution in one dimensional rod is plotted against space and time by using **MATLAB**
  - EXPLICIT and IMPLCIT methods are used along with Tri-diagonal matrix algorithm.

Online Projects| Kaggle Competition

- **House prices: Advanced regression Techniques** *(Jul' 20)*
  - Data preprocessing to fill null values and remove unneeded columns.
  - **One hot encoding** to tackle catogarical values and **XGBOOST** algorithm to build model ,it gives house prices with 0.14221 RMSE
- **Whether employee will leave company or not** *(May' 20)*
  - **Lable encoding** to convert categorical features.
  - **RANDOM FOREST Classifier** algorithm that will predict whether employee will leave or not.

MASTERS PROJECT

- **MTech Project | IIT Bombay**
- **Dynamics of particle Bearing-Jets using PIV** *(Jan' 20-present)*
  Guide: Prof. Sridhar Balasubramanian
  - To experimentally study the bulk characteristics of particle bearing jet.
  - To probe the local dynamics of flow using **Particle Image Velocimetry(PIV)**
  - Outcome of project will be flow pattern of turbulence flow containing particles which will be useful for studying flows such as flow of rivers containing sediments
- **B.E. Project | Thermal and Mechanical design of heat exchanger using HTRI and Pv-elite software**
  Guide: Prof. Pradnya Chaudhari *(2017 - 18)*
  - Analytical design using Kerns method and ASME
  - HTRI used for thermal design while Pv-elite is used for mechanical design.
  - Efficiency was increased by 4 percent

POSITION OF RESPONSIBILITIES

- **Teaching Assistant | Engineering Drawing Lab, Mechanical Department IIT Bombay** (*Jan' 20-Jun20)*
  - Teaching Autocad and Solidworks to the UG 1st year students
- **Interview Co-Ordinator, Placement Season 2019-2020, IIT Bombay** *(1 - 15 Dec'19)*
  - Coordinated with a team of 250+ members for interviews of 1400+ students
  - Assisted in conducting Pre-placement Talks and Tests for 10+ firms

SKILL SET

- Programming: Python, Matlab, **MySQL**
- Modelling: Autocad, SOLIDWORKS
- Key Courses: Introduction to Machine Learing, Computational tools for process Modelling, Computational Methods in Thermal and Fluid Engineerig, Mathematical Methods in Engineering

EXTRACURRICULAR ACTIVITIES

- Completed workshop on Arduino conducted by SCOE Pune *(Jan'17)*
- Participated in 'Roborace' event conducted by SCOE Pune *(Feb'16)*
- Participated in 'Astro-GC' in a team of 3 at IIT Bombay (Jan' 20)
- Participated in 'Crossy-GC' at IITB and completed 5km run in 23 minutes (Feb'20)
- **Leisure activities:** Playing Cricket, Cycling, Exercise