Roll No.:20105033
M.Tech - Solid Mechanics and Design
Mechanical Engineering
Indian Institute Of Technology, Kanpur

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## Education

| Degree/Certificate | Institute/Board | CGPA/Percentage | Year |
|---|---|---|---|
| M.Tech | Indian Institute of Technology, Kanpur | 7.50 | 2020-2022 |
| B.Tech. | Feroze Gandhi Institute of Engineering and Technology, Raebareli | 71.48% | 2015-2019 |
| Senior Secondary | Board of High School and Intermediate Education , Uttar Pradesh | 74.40% | 2013 |
| Secondary | Board of High School and Intermediate Education , Uttar Pradesh | 67.16% | 2011 |

## Projects

- **Correcting drift and spatial distortion in SEM images for effective DIC** *May. 2021 - Aug. 2022*
  *Dr. Sumit Basu/Department of ME/IIT Kanpur* Github
  – The objective of this project is to create a user friendly GUI for correcting the Drift Distortion of scanning electron microscope(SEM) images in order to get the better Digital image Correlation(DIC) using MATLAB.
  – Evaluation of change in drift for each pixel location by performing DIC on consecutive images in pair using NCORR.
  – Applied for determination of mechanical properties using Miniature tensile test in the scanning electron microscope.

- **Email Spam Classification using Logistic Regression, CNN, Naive-Bayes Classification** *Feb 2022*
  *Self Initiated Project* Github
  – The main objective of this project is to get the classification of email(Spam/No) using different machine learning algorithm and comparing the results of the same.

- **Generative adversarial network(GAN) for generating fake images** *Aug 2021*
  *Self Initiated Project* Github
  – Worked on generating new real images after showing the Generative adversarial network several images from the MNIST dataset.

- **Exploratory Data Analysis of Covid-19 cases in India** *May 2021*
  *Self Initiated Project* Github
  – This project is intended to visualize the Top 10 States of India having most no of active covid-19 cases and deaths and keeping track (records) for active cases as well as mortality percentage in India.

## Technical Skills

- **Programming**: Python, Matlab, C/C++*
- **Python Libraries** : Numpy, Pandas, Matplotlib, Scikit-learn, Pytorch, Keras , Tensorflow, OpenCV.
- **Tools and Software** : Jupyter Notebook, Spyder, Ncorr(DIC) Solid Works, Matlab, LaTeX.
- **DBMS** : MySQL

** Elementary proficiency*

## Key courses taken

- **Academic Courses**: Introduction to Solid Mechanics, Introduction to Continuum Mechanics, Applied Dynamics and Vibration, Mathematics for Engineers, Finite Element Method, Design for Manufacturing and Assembly, Fracture and Fatigue, Vibration Control
- **Udemy Courses**: Python for Data Science and Machine Learning Bootcamp, SQL -MySQL for Data Analytics and Business Intelligence, Statistics for Data Science and Business Analysis, Microsoft Excel-Excel from Beginner to Advance, Data Structure and Algorithm
- **Coursera Courses**: Supervised Machine Learning: Regression and Classification, Advanced Learning Algorithms, Unsupervised Learning, Recommenders, Reinforcement Learning

## Positions of Responsibility

- **Teaching Assistant**, for PG course Introduction to solid mechanics(ME621A) under Dr. Basant Lal Sharma *2021*
  – Assisted instructor with grading the assignments and quizzes.
  – Assisted in timely conduct of sessions.

## Achievements

- **GATE 2020(ME)**,Cleared with 95.67 percentile among 1.37 lakhs of student *2020*

## Extracurricular

- **Internship** ,Completed internship on Flange inspection and Heat treatment conducted by R. D. Forge *2018*
- **Interests** ,Table tennis, Cricket, Singing, Travelling
- **Participation** ,Inter branch cricket tournament in college *2015,2019*