**SOHIT PATHAK | MA22M019**

**INDIAN INSTITUTE OF TECHNOLOGY MADRAS**

INDUSTRIAL MATHEMATICS AND SCIENTIFIC COMPUTING



| **EDUCATION AND SCHOLASTIC ACHIEVEMENTS** | | | | |
| --- | --- | --- | --- | --- |
| **Program** | | **Institute** | **% / CGPA** | **Year** |
| MTech in Industrial Mathematics and Scientific Computing | | Indian Institute of Technology, Madras | - | 2024 |
| Msc. Mathematics | | Jamia Millia Islamia | 85.1 | 2020 |
| BSc. Hons Mathematics | | Motilal Nehru College, University of Delhi | 80.1 | 2017 |
| Class XII | | Chinmay Higher Secondary School, Madhya Pradesh | 91.2 | 2014 |
| Class X | | Chinmay Higher Secondary School, Madhya Pradesh | 85.1 | 2012 |
| **National Exam score** | | * Secured an AIR 197 in GATE Mathematics (MA) 2021. * Secured an AIR 67 in CSIR-UGC NET Mathematics, June 2021. | | |
| **PROFESSIONAL WORK EXPERIENCE** | | | | |
| **Chegg**  *(Mar’ 21 – Present)* | **Chegg Subject Expert in Mathematics**   * Working as an Online tutor at Chegg platform. | | | |
| **COURSEWORK** | | | | |
| **Graduation** | * Numerical Methods and Programming, Differential Equations, Linear Programming and Theory of Games, Number theory, | | | |
| **Mtech 1st SEM** | * Data Structures and Algorithms * Applied Statistics. | | | |
| **Ongoing courses** | * Data Science : Theory and Practice , Data Visualization * Stochastic Methods in Industry, Optimization Technique . | | | |
| **PROJECTS** | | | | |
| **House Price Prediction using Different Machine Learning Models** | * Predicted house prices using linear regression, decision trees, Random Forest , CatBoost Regression, LightGBM Regression and XGBoost models. * Achieved an RMSE-value of 0.81 using the CatBoost Regression model | | | |
| **Customer Segmentation using PCA and K-Means Clustering** | * Conducted customer segmentation for an e-commerce company using Principal * Component Analysis (PCA) to reduce the dimensionality of the data and K-Means * Clustering to identify distinct customer segments based on their purchase behavior. | | | |
| **(Ongoing Project) Comparative Study of Different Convolutional Neural Network (CNN) Architectures for Potato Diseases Classification** | * Analyzing the effectiveness of CNN architectures VGG16, AlexNet in PlantVillage Dataset. | | | |
| **SKILLS** | | | | |
| **Basic** | * **Python.** | | | |
| **Moderate** | * **Problem Solving**. | | | |
| **Libraries** | * **Pandas , Numpy , Matplotlib , Scikit-learn .** | | | |