



## UTKARSH MATHUR

Email: [umathur@ch.itr.ac.in](mailto:umathur@ch.itr.ac.in)  
Website: <https://007mathur.github.io>  
Github: <https://github.com/007mathur>

### FORMAL EDUCATION

YEAR	DEGREE / BOARD	INSTITUTE / BOARD	Score
2022	B.Tech. Polymer Science and Engineering	Indian Institute of Technology, Roorkee	6.16/10
2018	Twelfth	Central Board of Secondary Education (CBSE)	87.6%
2016	Tenth	Central Board of Secondary Education (CBSE)	9.6/10

### KNOWLEDGE & SKILLS

**Academic Courses:** Design and analysis of Algorithms (NPTEL), IEE-03 Artificial Neural Networks, MAN-303 Mathematical Statistics, PEN-103 Computer Programming and Numerical Methods, CHN-323 Computer Application in Chemical Engineering

**Professional Courses:** Deep Learning Specialisation (Coursera), Machine Learning A-Z (Udemy), Deep Learning A-Z (Udemy), Artificial Intelligence Nanodegree (Udacity), Sports Analytics Using Python (Mad About Sports), Data Science using Python (EICT IIT Roorkee), Quick Review of Python (Udemy)

**Programming Skills:** Object Oriented Programming, Data Structures and Algorithms, Machine Learning, Artificial Neural Network, Deep Learning, Computer Vision, Artificial Intelligence, Natural Language Processing, Big Data

**Programming Languages:** Python, R, Rust, C++, Java, Perl, SQL, MATLAB

**Libraries & Packages:** NumPy, Pandas, Matplotlib, Seaborn, Scikit-Learn, SciPy, TensorFlow, Keras, PyTorch, PySpark, OpenCV, PIL (Python Imaging Library), OpenCV, Git, Material Studio, Tableau

**LinkedIn Skill Badge** – Python

**Datasets Practiced** - FER-2013, Melbourne Housing Snapshot, CIFAR-10, MNSIT– Handwritten digits, Titanic Dataset

### EXPERIENCE

1. **ML Engineering Intern** – HONO July 2021 – October 2021
2. **Data Science Intern** - ImagoAI April 2021 – May 2021

### PROJECTS

**Semantic Segmentations of Ocular Images** – Research Project (IIT Roorkee)

Completed a project under Dr. Mayank Goswami, Assistant Professor, Department of Physics, IIT Roorkee. The aim was to perform semantic segmentation over tumor-infected ocular images of rats. The conclusions were decisive enough to defy our predictions.

**Breast Cancer Classification** – Course Project (IEE 03 Artificial Neural Networks)

The main objective is to compare these three models - Support Vector Machine (SVM), Neural Network (with Particle Swarm Optimizer), and Neural Network (with Gradient Descent) over Breast Cancer Classification. The conclusion was SVM models perform a better classification task than Neural Networks models when the number of training examples is small (in this case only 512).

**Production of Sustainable Aviation Fuel** – B.Tech. Project (IIT, Roorkee)

It is project assigned to a group of 5 students under the mentorship of Dr. PK Jha, Associate Professor, Chemical Department, IIT Roorkee. The aim of the project is to design a production plant that optimizes the production of Sustainable Aviation Fuel in India.

**Motion of Liquid Droplet on Inclined Super-hydrophobic Surfaces** – Research Project (IIT Roorkee)

Completed a project under Dr. Gaurav Manik, Associate Professor, Department of Polymer and Packaging, IIT Roorkee. Scripted a library extension for Forcite module of Material Studio to calculate the contact angle and motion of a liquid droplet on an inclined surface coated with super-hydrophobic polymers.

### POSITIONS OF RESPONSIBILITIES & EXTRA-CURRICULARS

- Member – **Team Inclusion, IIT Roorkee** September 2020 - Present
- Placement Associate – **Placement and Internship cell (PIC), IIT Roorkee** January 2020 – August 2020
- Manager - **TEDx IITROORKEE** May 2019 – April 2020
- Volunteer - **Prahari Kaksh, NSS (3 UK CTR), IIT Roorkee** September 2018 – Present
- Core Team member – **Cognizance, IIT Roorkee** November 2018 – January 2020
- Friend of Section – **Music Section, IIT Roorkee** September 2018 – Present