UTKARSH MATHUR

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EDUCATION

Indian Institute of Technology, Roorkee **July 2018 – July 2022**

B.Tech. Polymer Science and Engineering

Course: Design & Analysis of Algorithms, Artificial Neural Networks, Mathematical Statistics, Computer Programming & Numerical Analysis, Mathematics (Calculus, Matrix Algebra), Mathematical Methods (ODE, PDE, Laplace, Z, and Fourier Transform)

Societies & Activities: Student Mentorship Program (Student Mentor), Team Inclusion (Member), Placement and Internship Cell (Company Associate), TED x IIT Roorkee (Manager), National Cadet Cell (Prahari Kaksh), Cognizance (Core Team Member), Music Section (Vocalist)

KNOWLEDGE & SKILLS

Professional Courses: Deep Learning Specialization (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)

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

ACHIEVEMENTS

- Secured All India Rank 6902 in JEE Advanced 2018 (out of more than 150,000 students) post selection from JEE Mains 2018 by securing All India Rank 9040 (out of more than 1,200,000 students).
- Secured 10th Rank in Rajasthan State Talent Search Examination (STSE) 2015.

EXPERIENCE

Data Scientist | Quinbay **May 2022 – October 2022**

- Working on providing data-centric services for BliBli, one of the leading Indonesian e-commerce websites.
- Worked on projects involving Deep Learning Computer Vision and Natural Language Processing (NLP).
- Experienced end-to-end deployment of 2 projects involving complex Deep Learning models.

ML Engineering Intern | HONO **July 2021 – April 2022**

- Worked on building Predictive Analysis models for 8 use-cases pertaining to the HR.
- Completed 8 projects of developing automated ML models for various product requirements of upcoming HONO services.
- Skills like performing data preprocessing, data analysis, building ML models in Python, and project documentation were used regularly.

Data Science Intern | Imago AI **April 2021 – May 2021**

- Provided ML models on agriculture centric Hyperspectral images for 4 key integral services of the Imago AI product
- Built Machine Learning models using Python and its libraries to implement numerous classification and regression algorithms.
- Major takeaway were the data preprocessing techniques which were practiced owing to the general complexity of Hyperspectral images.

PROJECTS

Feature Selection with GWO | Research Project (IIT Roorkee)

- Ongoing project in collaboration with Ms. Preeti, PhD student of Dr. Kusum Deep, Professor, Department of Mathematics, IIT Roorkee.
- This project aims to optimize feature selection process by inclusion of Random Walk Grey Wolf Optimization (RW-GWO).

Semantic Segmentations of Ocular Images | Research Project (IIT Roorkee)

- Completed a project under Dr. Mayank Goswami, Assistant Professor, Department of Physics, IIT Roorkee.
- Build several renditions of deep learning models to perform semantic segmentation over tumor-infected ocular images of rats.

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

- The main objective is to compare these three models - Support Vector Machine (SVM), Artificial Neural Network (ANN) (with Particle Swarm Optimizer), and Artificial Neural Network (ANN) (with Gradient Descent) over Breast Cancer Classification.
- Conclusion was SVM perform a better classification task than ANN models on dataset with fewer training examples (512 examples).

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

- It is project assigned to a group of 5 students under the aegis 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.