UTKARSH MATHUR

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EDUCATION

MS: Engineering Science: Data Science, University at Buffalo, SUNY [January 2023 – Present]

- **Relevant Coursework**: Probability Theory, Statistical Learning and Data Mining, Numerical Mathematics, Programming and Databases (Python)

B.Tech.: Polymer Science and Engineering, Indian Institute of Technology Roorkee [July 2018 – May 2022]

- **Relevant Coursework**: Design & Analysis of Algorithms, Artificial Neural Networks, Computer Programming, Mathematics (Calculus, Linear Algebra, Statistics, Numerical Methods & Analysis)
- **Capstone Project**: Production of Sustainable Aviation Fuel (Mentor - Dr. PK Jha)

TECHNICAL SKILLS

- **Programming Languages**: Python, SQL, R, MATLAB, C++, Perl, Java
- **Technical Knowledge**: Data Science, Machine Learning, Computer Vision, Natural Language Processing, Object-Oriented Programming, Data Analysis, Data Mining, Web Scraping, Statistical Analysis

EXPERIENCE

Data Scientist, Quinbay, Bengaluru: May 2022 - October 2022

- Developed data-centric services for BliBli, one of leading Indonesian e-commerce websites, on products involving Deep Learning Computer Vision and Natural Language Processing (NLP) applications.
- Deployed quantized version of trained Computer Vision models. (Computer Vision, Model Quantization)
- Deployed a feature to identify counterfeit products of recognized brands which required analysis of product images and product details in English and Bahasa. (Data Analysis, Computer Vision, NLP)

Machine Learning Intern, Hono, Remote: July 2021 - April 2022

- Worked in the Predictive Analytics team of Hono – Conversational AI powered HRMS software.
- Developed automated predictive analytics services based on Statistical Analysis techniques and Machine Learning Algorithms for 8 products of Hono which were adaptable to client database.
- Deployed organization hierarchical structure feature which constructs organization hierarchy of clients from the provided employee database that was used to analyze team performances (Network Analysis).

Data Science Intern, Imago AI, Remote: April 2021 - May 2021

- Worked as a Data Science intern at ImagoAI, AI based food safety & quality testing software.
- Built quality testing AI models for 4 services based on Machine Learning algorithms trained on Hyperspectral Images.

PROJECTS

Semantic Segmentations of Ocular Images: Python, MATLAB

- Experimented on Deep Learning algorithms for semantic segmentation over tumor-infected ocular images of rats to estimate tumor growth and trends.
- Trained multiple versions of U-Net architecture based Deep Learning models over manually annotated OCT B-Scans.

Feature Selection with GWO: Python

- Developed programs for feature selection optimization techniques using Grey Wolf Optimization (GWO) techniques.
- Used datasets from multiple domains to test the optimized feature selection techniques which were based on Random Walk Grey Wolf Optimization (RW-GWO) technique.

Regression Analysis: R

- Demonstrated the role of dimensionality and volume of data in regression tasks by comparing 7 regression models trained with various optimization and regularization techniques on 2 different datasets.

Classification Analysis: R

- Compared performances 7 classification techniques in a binary classification task and analyzed the impact of each feature of the dataset in explanation of variance of target variable in each model to better understand the techniques.

Breast Cancer Classification: Python

- Developed and analyzed performance of Support Vector Machine, Neural Networks (Backpropagation), and Neural Networks (Particle Swarm Optimization) trained over Breast Cancer Classification data (UCI repository).