Phone Number: +91 9340896912
Email: rajul.mahto2021@vitbhopal.ac.in
LinkedIn: https://www.linkedin.com/in/rajul-mahto-313463200/
GitHub: https://github.com/Rajulmahto21

Rajul Mahto

Technical Skills: Python, C, C++, Linux, Java, SQL, Machine Learning, Deep Learning, HTML, JavaScript, R, Heuristic Algorithm Hybridization, Algorithm Optimization, RNA-seq, Transcriptomic Analysis.

EDUCATION

Board	Tenure	Educational institution	CGPA/Percentage
B. Tech (CSE)	September 21 –Ongoing	VIT Bhopal University, Bhopal	9.14/10
Class XII	March 20 - July 2021	St. Gabriel's Sr. Sec School, Ranjhi	93%
Class X	April 18 - May 2019	St. Gabriel's Sr. Sec School, Ranjhi	95.6%

PROJECTS

Deep Learning Projects

1) **Cancer Detection Model** (April 2023) Github
   - Formulated a novel nature heuristic based **hybridized** algorithm (**HHWOA**) for classifying cancer from RNA-seq data; resulting in reduction of **97%** selected genes alongside **100%** classification accuracy.
   - Utilized the dataset from **NCBI**; Built a custom **RNA-seq pipeline** (in **Python** & **R**) using **STAR aligner**, **FastQC** for quality assessment, quantification with **FeatureCounts** and **DESeq2** for differential gene expression analysis. Pipeline was made in **Linux** WSL (Ubuntu).
2) **Fish Classification Using Deep Learning** (September 2022) GitHub
   - Improved traditional **deep learning** algorithm by creating a **heuristic optimization** algorithm (**COWOA**) to categorize various fish species; resulting in **99.69%** classification accuracy.
   - Prosecuted comparison of various DL models such as **CNN**, **EfficientNetB7**, DenseNet, Inception V3, Resnet50, **VGG19** (in **Python**).

Web Development

3) **MintHub** (May 2023) GitHub
   - Created a **real time** cryptocurrency **price tracking** and graphical visualization-based website to keep users updated with market trends.
   - Implemented **C2C international transactions** and **fund out feature**; resulting in **low-cost**, **fast cross-border payments** and seamless conversion of **crypto assets** into **INR** via **UPI**.

Web Scrapping

4) **Table Scrapper** (July 2021) Github
   - Designed a **Python** script to **extract tables** from websites & convert them into **CSV** or other desired formats.
   - Utilized libraries such as **Selenium** and **Pandas**; resulting in **reduced time** by automating the table scraping and **eliminating** the need for **manual extraction** or creation.

EXTRA-CURRICULARS AND ACHIEVEMENTS

Achievements

- Awarded certificate of merit for being among **the top 0.1%** of successful candidates in **AISCE by CBSE 2019**. (**Certificate**: Link)
- Received cash prize of Rs. 2,000/- for Securing highest percentage in Social Science and Foundation of Information Technology.

Extracurricular

- Participated in **Google Code-In 17, 18 & 19** won 4 T-shirts in total. Amongst the top 10 leaders according to ScoreLabs organization list in 2020. (**Certificates**: Link)

Publication

1) **Modified Genetic Algorithm with Deep Learning for Fraud Transactions of Ethereum Smart Contract.** Applied Sciences. 2023; 13(2):697. https://doi.org/10.3390/app13020697
2) **Novel Cuckoo Search-Based Metaheuristic Approach for Deep Learning Prediction of Depression.** Applied Sciences. 2023; 13(9):5322. https://doi.org/10.3390/app13095322
3) **CO-WOA: Novel Optimization Approach for Deep Learning Classification of Fish Image.** Chem. Biodiversity 2023, e202201123. https://doi.org/10.1002/cbdv.202201123

ADDITIONAL INFORMATION

Hobbies

- Learning Languages: Elementary Proficiency in German and Russian.
- Playing Games: Was in the school volleyball team.
- Going to the Gym: Regularly engage in weightlifting and cardio exercises to maintain and promote fitness.

Languages

- English, Hindi, German and Russian.