Atul Verma

Mtech in Maths and computing

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Education

- **Indian Institute of Technology; CGPA : 8.58/10.0** — Patna, Bihar
  Mtech in Maths and Computing — *Aug. 2020 – June. 2022*
- **Birla Institute of Technology** — Ranchi, Jharkhand
  Bachelor of Engineering in Computer Science — *Aug. 2014 – June. 2018*

Key Projects

- **Breast cancer prediction** — Sep, 2020
  - : Predicted whether the patient is benign or malignant as part of Machine learning course assignment.
  - : Detected and removed the outlier using 1.5(IQR) rule from scratch.
  - : Written k means and K medoid algorithm from scratch using python and trained the dataset.
  - : Written hierarchical agglomerative clustering(single, complete, average) from scratch and plotted three different clusters for the given parameter(Number of clusters = 2) and observed the difference .
  - : Written DB-scan from scratch using python for given three different parameters and observed the difference .
- **House price prediction Model** — Dec, 2020
  - : Estimating the sale price of a house.
  - : Data analysis and data preparation for applying machine learning algorithm.
  - : Written linear regression from scratch using python and trained the dataset.
- **Heart disease Predictor** — Oct, 2020
  - : Predicted whether a patient has heart disease or not as part of Machine learning course assignment.
  - : Written Decision tree from scratch using python to train the data-set.
  - : Implement the classifier using information gain and Gini index and reported the accuracy.
- **Parkinson Disease predictor** — Nov, 2020
  - : To classify if the person has Parkinson's disease or not.
  - : Done data analysis and data preparation.
  - : Used ensemble classifier of logistics regression, naive Bayes, and decision tree with 5 versions of each specified classifier (each version has different hyperparameter) in scratch using python.
  - : Compared to the performance of each ensemble model to its base model to check if there was a benefit of the ensemble model.

Programming Skills

- **Languages**: C, Python **Libraries**: Numpy, Pandas, Matplot Library, Seaborn, scikit-learn

COURSEWORK

- :C programming, Data structure and Algorithm, Machine learning, Computer Networks, Operating System, Database Management system