ARNAB DEY

B-234 VS Hall Of Residence, IIT Kharaghpur
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EDUCATION

Year	*Degree*	*Institute*	*CGPA or Marks*
2022	*Dual Degree 5Y*	*IIT Kharaghpur*	*9.40/10*
2017	*12th Boards*	*CBSE*	*94.60%*
2015	*10th Boards*	*CBSE*	*10/10*

PROJECTS

Eye Fixation Detection
The project aims at detecting Eye Fixation points from Eye tracking records provided by Tata Steel on the basis of two spatial parameters and one temporal parameter(minimum duration of fixation).

- Detected fixation clusters on the basis of given parameters in MATLAB.
- Created various kinds of visualizations to interpret the data such as Horizontal and Vertical coordinates along time, Scan-paths and Space Time Cube.
- Finally performed Dynamic Time Warping on Fixation datasets of two different person.

Machine Learning Term Project
The goal of the task is to develop a system that counts the number of vehicles in different categories(Car, Bus, Truck, Auto rickshaws, Bikes and cycles (Two Wheeler's)) that appear in a traffic video.

- Used Yolo Darknet Model to detect the vehicle, their class confidences and bounding boxes.
- Designed a tracker to count the vehicle as it passes the reference line.

COMPETITIONS

Inter IIT Tech Meet 8.0 (BitGrit Data Science Contest)
Ranked 1st among all participating IIT's.

- Round 1: Predict the foreign exchange rates from market and economic news data. We used Bi-Lstm to generate new features from the word vectors of economic news data given to us which we used with the market features to develop a final stacked model of CatBoost, LightGBM, Random Forest.
- Round 2: We were given attrition data of employees of a particular industry. We had to extract maximum value of the dataset, used clustering to group the employees on the basis of their attrition reason and also developed a model to predict their tenure.

Zaloni Techniche Datathon — IIT Guwahati Techfest
Ranked 2/150 registered students. The competition comprised of two rounds.

- Round 1: Predict the Race and Gender given a person's name. Used Character Level Bi-Lstm to predict the gender and race and achieved a F1-score of 0.828.
- Round 2: Prepare a Name Entity Recognition Model in Open-NLP that can detect Indian Names.

Game of Deep Learning (Computer-vision Hackathon) — Analytics Vidya
The goal of the task is to build a image classifier that classifies 5 different categories of ships.

- Ranked 25/2083 registered students with a private f1-score of 0.97.
- Designed a stacked model of Inception v-3, Densenet and Vgg-19 to predict the ship categories.

TECHNICAL STRENGTHS

Programming Languages: Python, C, C++, SQL, PHP, Javascript
Libraries: Tensorflow, Keras, Pandas, Numpy, SkLearn, Pytorch, Matplotlib
Operating System: Windows, Linux
Utilities: Git, SolidWorks, MS Office

COUREWORK INFORMATION

Machine Learning — Programming and Data Stuctures — Probability and Statistics — Data Structures and Algorithms Online Courses:

- Machine Learning (Andrew NG).
- Deep Learning Specialization

POSITIONS OF RESPONSIBILITY

Web Team Head at Kshitij, IIT Kharaghpur.

- In charge of creating and maintaining the official website of Kshitij.
- Developed the website of Kshitij 2019 which had 6M+ views, used Codeigniter MVC Framework for backend and Vue js for Frontend.
- Conducted web summer training workshops for over 50 students and gave them rigorous training in HTML, CSS, Javascript, PHP and MySQL.

EXTRA-CIRRUCULAR

- National Service Scheme 2017-2019: During the period 2017-19 many works were done for the welfare of the people of nearby villages which includes teaching the village students ,building toilets and drainage system during winter camp ,spreading awareness about welfare of girl child ,blood donation camp etc.
- Captain of Chemquest team, VS Hall IIT Kharaghpur.
- Participated in Opensoft, Chemquest, Data-Analytics in Inter Hall General Championship.