

Indranil Chakraborty

111, Jheel Road , Bank Plot, Vivek Nagar, Jadavpur, Kolkata, 24 PGN(S),
West Bengal, India
Pin- 700075
+91 8768337973
indranilch2014@gmail.com

SKILLS

Programming languages:

PYTHON 3.9

Libraries known:

Numpy, Pandas, Matplotlib, Seaborn, Sklearn, plotly, dash, Folium, Openpyxl, WordCloud, Urllib,
Requests, PIL, BeautifulSoup, Math, Cmath, Basemap, PyLab, Scipy, Mpl_toolkits, graphviz, csv,
pydotplus, Sqlite3, Os, NLTK, Tensorflow, Keras, Pyfetch etc.

C, R, MATLAB.

PYTHON IDE's known:

Jupyter Notebook (Google Colab notebook, Kaggle notebook), Pycharm, VS-code.

SQL Databases known:

Google Bigquery, IBM Db2, MariaDB, MySQL.

Data Manipulation and Data Visualization using:

Python Libraries like matplotlib, seaborn, plotly, dash, etc.,

TABLEAU, MS-Excel, Google sheets.

Other skills:

Mathematical functions and Statistics using Python and R, Machine learning in Python,

Basics of Natural Language Processing and Deep learning in Python (Tensorflow, Keras, NLTK),

Data structures and algorithms in Python,

Languages (Read and Write): English, Bengali, Hindi

MS-Powerpoint, MS-Word, Google-Docs, Google-Slides, Bitpaper, etc.

EDUCATION

Indian Institute of Technology, Kharagpur (IIT Kgp)

JULY 2011 - AUGUST 2017

Bachelor of Science (Honors) and Master of Science in PHYSICS CGPA: 7.02

- All India Rank at IIT JEE, 2011: 4023
- State Rank at WB JEE, 2011: 501
- All India Rank at AIEEE, 2011: 2177

Bodhicarya Senior Secondary School,

Location: M Ngr Kadampukur 24PGN(N) West Bengal

Passed the Senior School Certificate Examination, CBSE (held in March, 2010)

Total Score: 83.8%

- English Core(71), Physics(90), Chemistry(95), Mathematics(80)

Ramakrishna Mission Vidyalaya Narendrapur,

Location: Kolkata, West Bengal

Passed the Secondary Examination, WBBSE (held in April, 2008)

Total Score: 86.5%

- English (82), Physical Science (89), Mathematics (94), Computer Applications (94)

CERTIFICATIONS

Course title: **Data Science with Python by IBM Skills Network (Coursera.org)**

JUNE 2022 - AUGUST 2022

- <https://www.coursera.org/account/accomplishments/professional-cert/9TSZY9A977CR>

Course title: **SQL , Machine Learning and other courses in Kaggle.com**

AUGUST 2022- SEPTEMBER 2022

- https://github.com/indranilch2014/Kaggle_certificates_images_and_links/tree/main/kaggle_certificates_image_files

PROJECTS

1. Performing some Exploratory Data Analysis (EDA) to find some patterns in the SpaceX Launch data.

- Calculating the number of launches from each Launch site after reading the csv file
- Calculating the number of distinct orbit types and number and occurrence of mission outcome per orbit type
- Using Folium to find the geographical patterns about the Launch sites.
- Building interactive Dashboards using Plotly, dash and Tableau to Visualize the relationship between Launch site type and Payload mass , orbit type and Payload mass, Flight number etc. of the SpaceX data.
- Using Feature Engineering to find those features which affect the Success rate in the Launch outcome.

2. Training various Machine learning models on the SpaceX data and finding the best Hyperparameter.

- Creating a user defined function that uses sklearn and matplotlib to plot the confusion matrix for various classification algorithms
- Changing the Class column to Numpy array and we standardize the data and also split the data into training set and test set.
- Training the various models namely logistic regression, Support vector machines, decision tree classifier, K-nearest neighbor and tuning the hyperparameter using GridSearchCV function
- Predicting the Landing outcome for various classification algorithms on the test data and then plotting the confusion matrix for each model tested on the test data to get the number of true negatives, false positives and accuracy
- Comparing the models and finding which model works best for predicting the landing outcome on test data.

3. Loading the SpaceX dataset into the IBM Db2 database and executing SQL queries in the Jupyter Notebook.

- The SpaceX launch dataset in csv format is uploaded in the Db2 database and then the SQL extension is loaded in the Jupyter notebook cell and a connection is established with the database using `sqlite3.connect()` function.
- Using the %sql in the notebook cells we execute some SQL queries on the dataset to::
- obtain the names of unique launch sites,
- display the total payload mass carried by NASA(CRS),
- display the average payload mass carried by a particular type of booster version,
- display the list of dates and times (in ascending order) of the successful landing outcomes achieved in ground pad and month names, launch sites, booster versions of failure landing outcomes in drone ship in the year 2015.
- Display the list of all booster versions and their corresponding payload mass that have payload mass in between 4000kg and 6000kg.
- Display the total number of successful landing outcomes in drone ship and in ground pad that were achieved between 4th June,2010 and 20th March,2017.

GITHUB LINKs for all Projects: <https://github.com/indranilch2014>

TABLEAU PUBLIC Profile link:

<https://public.tableau.com/app/profile/indranil.chakraborty5263/>

KAGGLE Profile link: <https://www.kaggle.com/indranilch2014>