

Understanding the Problem Statement

Problem Definition

Click Prediction Dataset

- An Advertising company delivers more than 3 Billion clicks per month to its advertisers.
- It buys space on the Publishers site and then shows an advertisement about the Advertiser at that space.
- The advertiser pays the company for every conversion from the clicks.
- The company wants to leverage the machine learning to improve the conversions for its clients.

Click Prediction Dataset

| | |
|----------------------|---|
| ID | Unique ID of the Click |
| Country | Country Code |
| Carrier | Wireless Network Operator Code |
| TrafficType | Whether the advertisement is for Adults or mainstream |
| ClickDate | Date at which the advertisement was clicked |
| Device | Type of Device from which advertisement was clicked |
| Browser | Type of Browser from which advertisement was clicked |
| OS | Type of OS from which advertisement was clicked |
| publisherID | Unique ID of publisher |
| advertiserCampaignID | Unique ID of campaign of advertisement |
| Fraud | If the click was fraud or not |
| ConversionStatus | If customer clicked on ad or not (Target) |

Data Exploration

Data Exploration

- Univariate Analysis
- Bi-variate Analysis
- Null Values





Preprocessing

Preprocessing

- Drop columns
- Fill null values
- Reduce categories within categorical columns
- Feature engineering



Model Building

Model Building

- Logistic Regression
- Decision Tree Classifier



Model Tuning



Model Tuning

- Cross-Validation
- Grid Search CV





Thank You!!