REPORT

**NAMES:**

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**INVOLVES:**

* Department
* Work experience
* Key learning

**DEPARTMENT: ANALYSIS, ALGORITHM,CODING**

We both together handled the part of analysis of the problem, prescribing algorithm for analysis and coding it down.

**ANALYSING PROBLEM STATEMENT:**

Our project problem was twitter analysis for last mile delivery .

To start with analysis, we need to first understand the basic crux of our problem statement.

so, first questions arise what last mile delivery is ?

The Last Mile team helps get customer packages from delivery stations to a customer’s doorstep.

Working on the front lines of Last Mile team means that they have a tangible impact on a customer’s experience getting their package. They deliver packages to homes, businesses, Amazon Lockers, and even cars all over the world! This network is powered by hundreds of small businesses and tens of thousands of drivers that leverage Amazon technology to deliver millions of smiles to customers each day.

Now, the next question that arise is how twitter is related to it?

Social media is one of the biggest channels of public expressions and is used to communicate opinions and content and these opinions could be used to understand the public perception about different topics.

With this the question which comes to our mind is why we have chosen only twitter for the extraction of information and not any other platform.

Well! answer to this question can be explained in 3 simple points.

* First, according to the survey twitter has 330 million monthly active users and over 145 million daily active user and that is why it has become imp source of information for analyzing opinions and sentiments.
* Second, unlike other social platforms, almost every user’s tweets are completely public and pullable. This is a huge plus if we are trying to get a large amount of data to run analytics on.
* And lastly, Twitter data is also specific.

Another question that arise is how is this analysis going to help our company ?

So, this analysis would help us to determine how our company is being mentioned on twitter or in other words how is it being received in public and what are the different reasons for the same.

Then we can work accordingly to improve those areas and satisfy our customer on a big scale by taking appropriate actions. This would in turn help our company to get better in competition.

**HOW WE BOTH APPROACH AND ANALYSED THE PROBLEM:**

* First to approach the problem we decided to start with analysis of the sentiments tweeted by tweetrians about the last mile delivery provided by the amazon . classifying those sentiments in negative positive and neutral will help us in determining how satisfactory the services being provided , how much satisfy the people are the with the services and how much scope of improvement is there globally.
* Second approach was to go deep down and target areas, to understand how sentiments of people of the given area are associated with the last delivery service. Classifying sentiments in positive ,negative and neutral area wise ,will provide nuances of services in those areas.
* Third approach was to target some most prominent problems mentioned in negative sentiment marked tweets. For this we determined common tags and hashtags and list down the problems such as : packaging issue, late delivery, damaged product , fake product and more.
* After this last approach was to determine how each area is affected by these problems. This would be beneficial in terms of making improvements to those area and take corrective measures.

**ALGORITHM AND CODING:**

To perform all these works we decided to use machine learning algorithms as it allows software app to become more accurate in predicting outcomes without being explicitly programmed which saves money and time both.

The language we have choosen is python for coding and open source jypter software to implement algorithms.

We proposed algorithm based on natural language processing after cleaning dataset and understanding its features. Also provided with the accuracy of model and its classification report.

In terms of coding, we provided code to classify sentiments in positive ,negative and neutral and count the tweets, problem wise and area wise.

**KEY LEARNINGS :**

* Throughout this experience ,we have learned how much outcome of each step in a process is important and impactful on overall outcome.
* we learnt that feedback from users can help in improving services which are being provided and feedbacks act as catalyst in improving the graphs of the company.
* Also we learned that to understand imbalances , scope of improvements we need to analyze and classify the dataset into categories which just do not break down the problem into smaller parts but also helps us in understanding the nuances of the impact of the service.
* Technically we learnt that why ml is trending , as it exponentially decreases the manual work.
* We have also understood the importance of classification report for any model.
* Amazon always makes sure that the customer problem is addressed irrespective of cost involved.
* How industry works, which skills are in demand, Which tools and technologies amazon use.
* Six core values of Amazon

1. Customer
2. Ownership
3. Frugality
4. High Hiring Bar
5. Bias for Action
6. Innovation

* 14 leadership principles

1. Customer Obsession
2. Ownership
3. Invent and Simplify
4. Learn and Be Curious
5. Think Big
6. Have Backbone, disagree and commit