



# COMCAST TELECOM CONSUMER COMPLAINTS DATA ANALYSIS



**PREPARED BY,  
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# **OVERVIEW**

## **DESCRIPTION**

- ❖ **COMCAST IS AN AMERICAN GLOBAL TELECOMMUNICATION COMPANY.**
- ❖ **THE FIRM HAS BEEN PROVIDING TERRIBLE CUSTOMER SERVICE.**
- ❖ **THE AUTHORITY FINED THEM A \$2.3 MILLION, AFTER RECEIVING OVER 1000 CONSUMER COMPLAINTS.**

# OVERVIEW

## DATA DICTIONARY

- **TICKET #:** TICKET NUMBER ASSIGNED TO EACH COMPLAINT
- **CUSTOMER COMPLAINT:** DESCRIPTION OF COMPLAINT
- **DATE:** DATE OF COMPLAINT
- **TIME:** TIME OF COMPLAINT
- **RECEIVED VIA:** MODE OF COMMUNICATION OF THE COMPLAINT
- **CITY:** CUSTOMER CITY
- **STATE:** CUSTOMER STATE
- **ZIP CODE:** CUSTOMER ZIP
- **STATUS:** STATUS OF COMPLAINT
- **FILING ON BEHALF OF SOMEONE**



# OVERVIEW

## CUSTOMER COMPLAINT DASHBOARD

SELECT RECEIVED

INTERNET

2,224

TOTAL COMPLAINTS

1,119 | 50.3147%

CUSTOMER CARE

1,105 | 49.6853%

INTERNET

### REQUEST TYPE



### STATUS



### STATEWISE COMPLAINT



### TREND

Date



### COMPLAINTS/DAY

Date



# OVERVIEW

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INTERNET

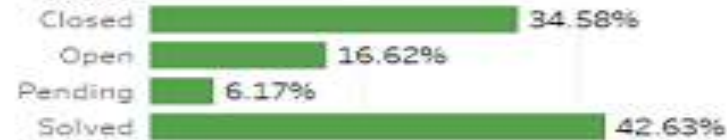
### REQUEST TYPE

Filing ...



### STATUS

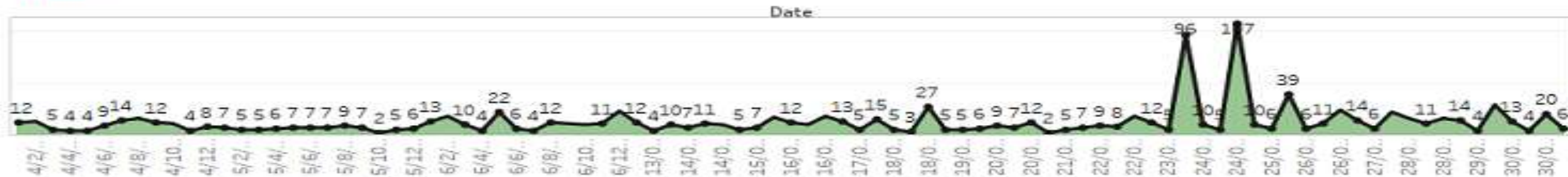
Status



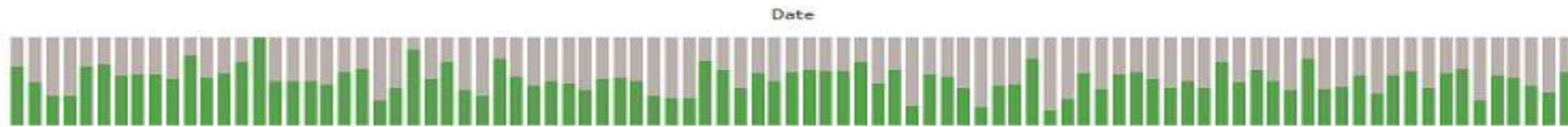
### STATEWISE COMPLAINT



### TREND

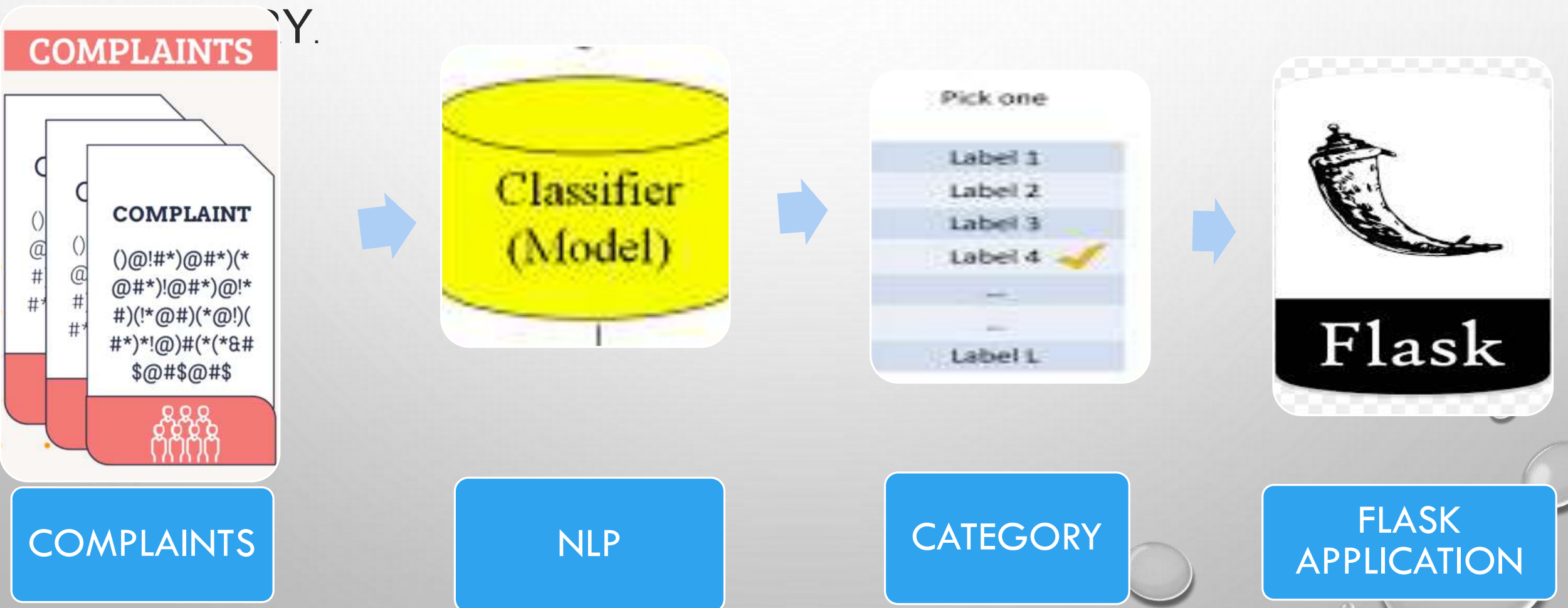


### COMPLAINTS/DAY



# PROJECT OBJECTIVE

- DEVELOPING A MODEL THAT CAN CORRECTLY CLASSIFY A CUSTOMER COMPLAINT ACCORDING TO IT'S COMPLAINT CATEGORY.





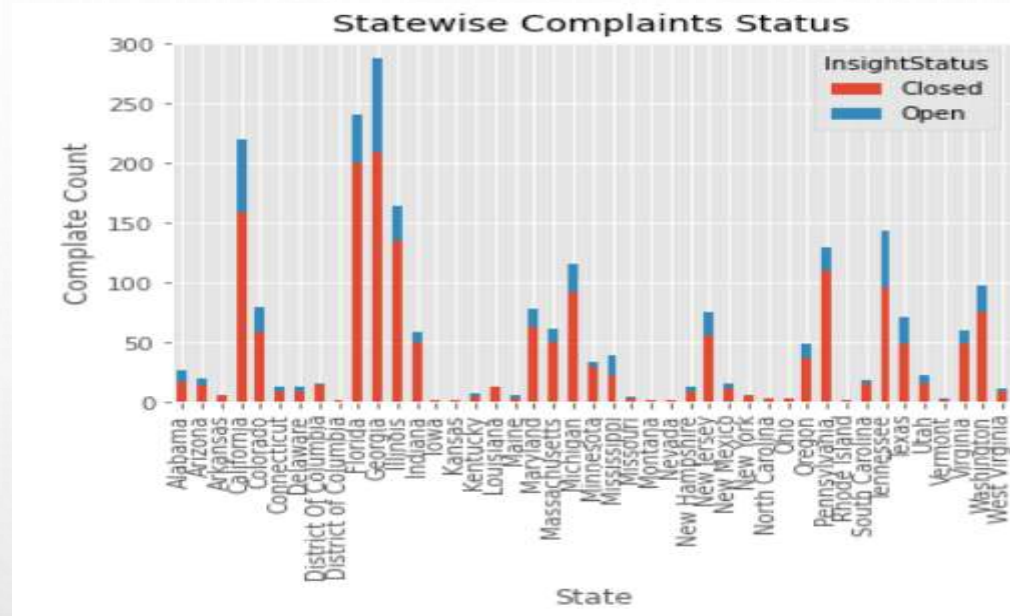
# **METHODOLOGY**

## **DEFINING THE PROBLEM**

- **DATA EXPLORATION (UNDERSTANDING THE DATASET)**
- **DATA (TEXT) PRE-PROCESSING AND THE GENERAL STEPS ONE MIGHT TAKE IN AN NLP PROJECT**
- **MODEL CREATION**
- **MODEL FINAL TEST AND RESULTS**
- **FLASK APP**

# FINDINGS

## I. LOCATION EXPLORATION

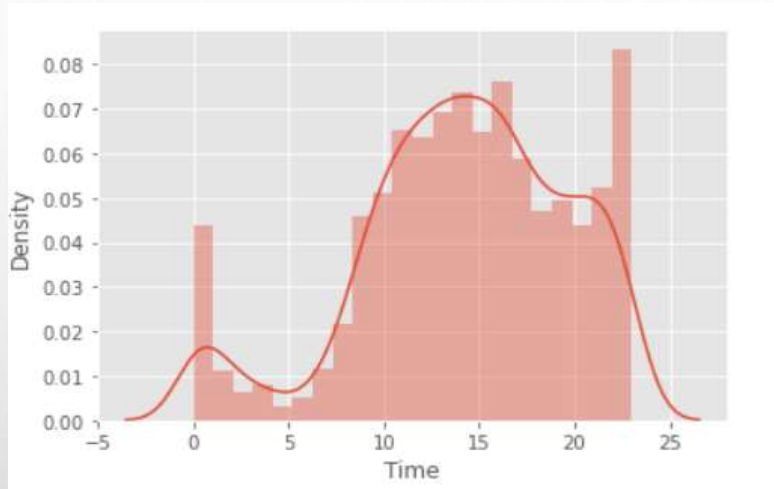


- AS SHOWN THE ABOVE, WE CAN CONCLUDE THERE ARE THREE MAIN HOTSPOTS WHICH LOCATED AT APPROXIMATELY:
  - 1.GEORGIA
  - 2.FLORIDA
  - 3.CALIFORNIA
- TO REDUCE THE COMPANY COMPLAINTS, IT IS HIGHLY RECOMMENDED TO FOCUS AROUND THESE THREE HOTSPOTS SINCE THERE'S A LOT OF CUSTOMER SPENDING THEIR MONEY THERE.

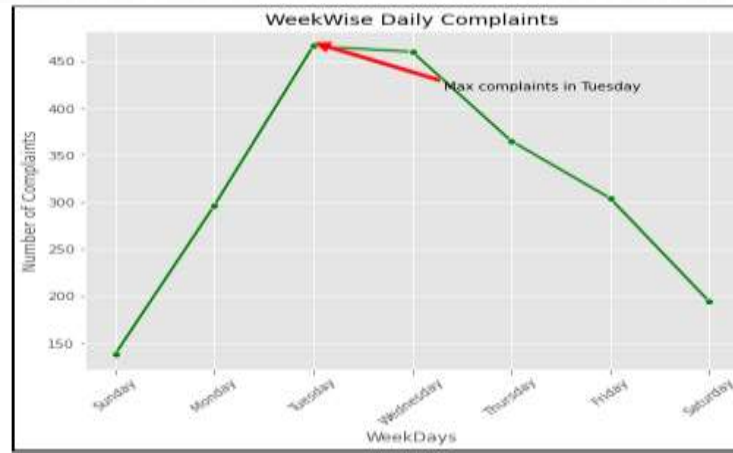


# FINDINGS

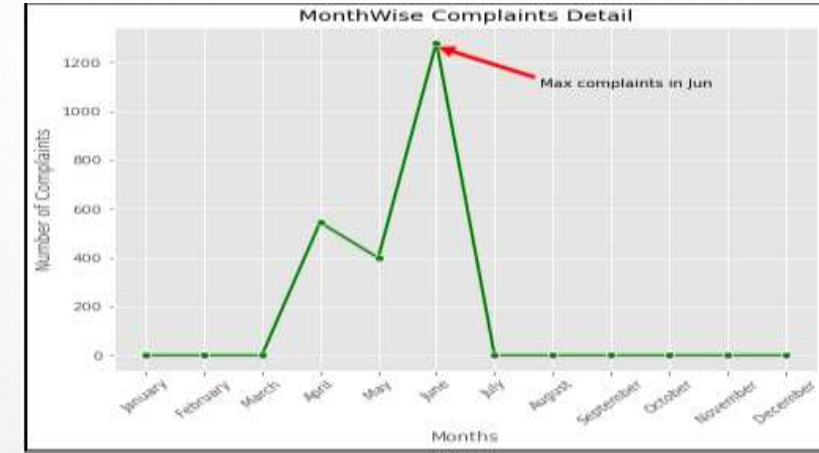
## II. TIME PERIOD EXPLORATION



HOUR



DAY



MONTH

➤ BASED ON THE PREVIOUS ANALYSIS, I RECOMMEND THE COMPANY TO SOLVE COMPLAINTS ON:

- HOUR: AROUND 8 AM - 24 PM
- DAY: TUESDAY, WEDNESDAY ( ESPECIALLY 24<sup>TH</sup>)
- MONTH: JUNE, APRIL

➤ THERE ARE SOME TIME WITH LOW NUMBER OF COMPLAINTS WHICH THE COMPANY CAN AVOID:

- HOUR: AROUND 3 AM - 6 AM
- DAY: SUNDAY
- MONTH: MAY

# FINDINGS

## III SENTIMENT ANALYSIS

❖ BY ANALYZING THE NEGATIVE SENTIMENT OF THE COMMENT. I RECOMMEND FOR THE COMPANY TO:

- INCREASE QUALITY OF THE CUSTOMER SERVICES.
- CHECK INTERNET PERFORMANCE AND SPEED .
- PAY ATTENTION ON THE BILLING AND PRICING.

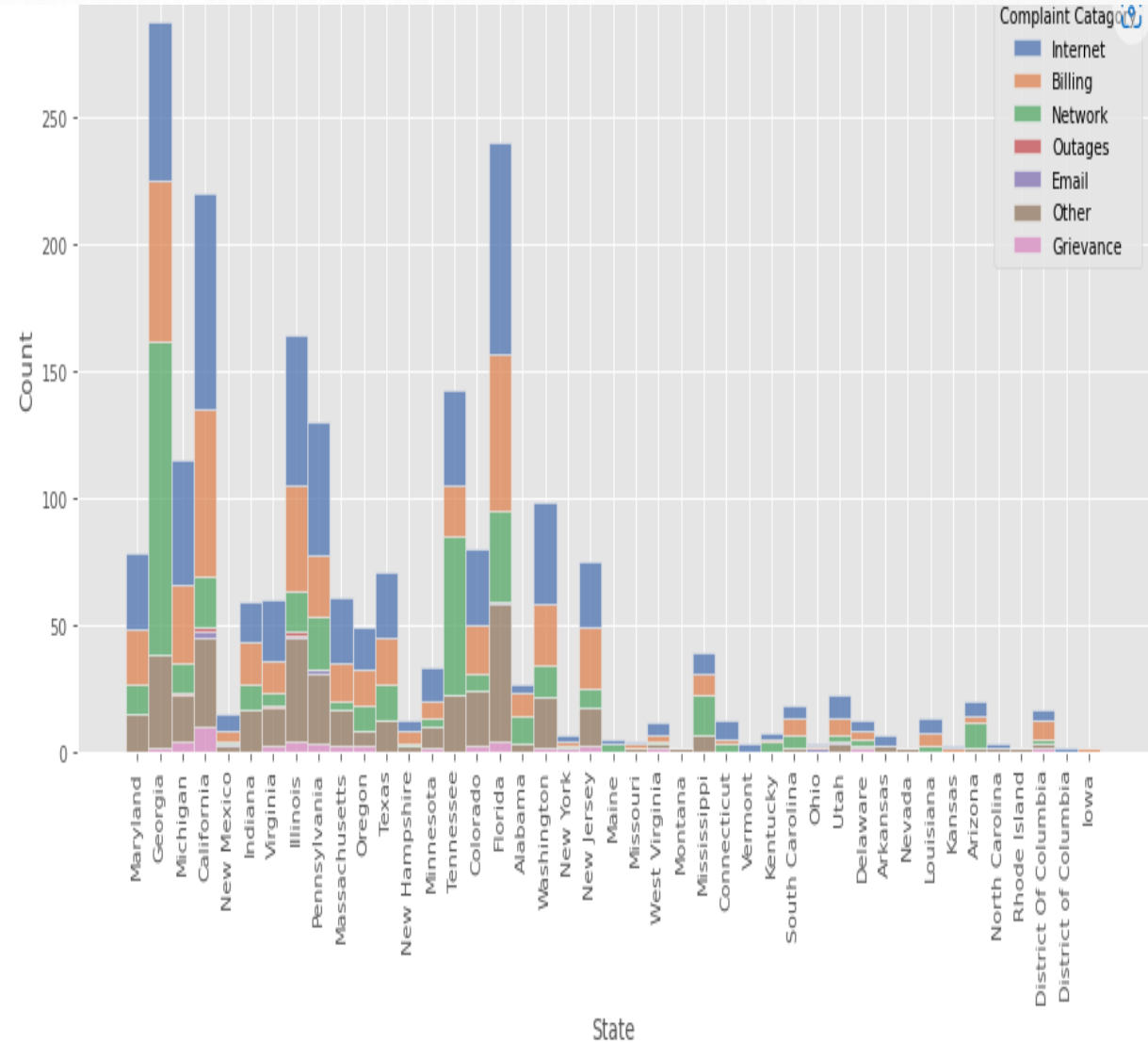
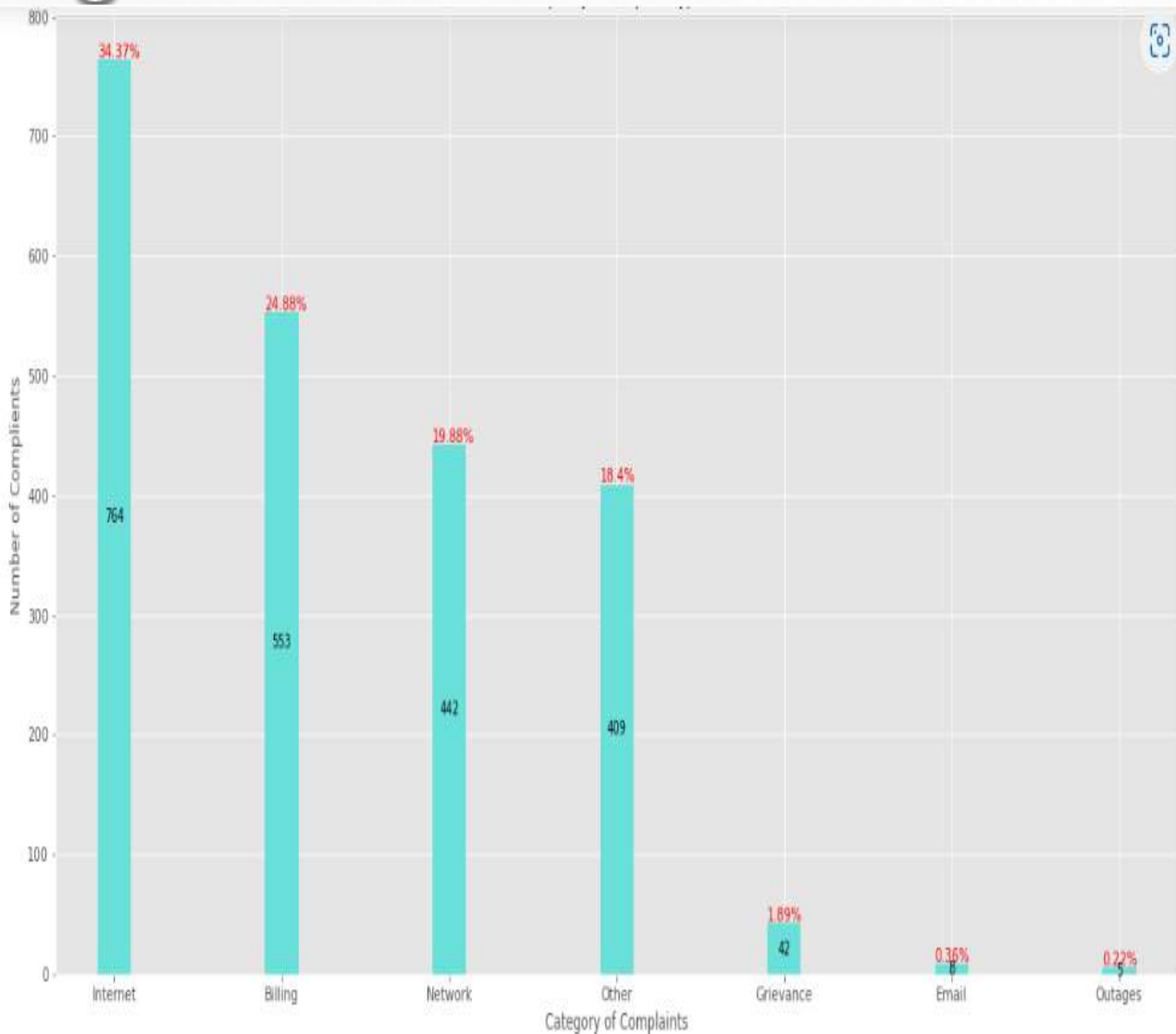
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❖ **BY ANALYZING THE NEGATIVE SENTIMENT OF THE COMMENT. I RECOMMEND FOR THE COMPANY TO:**

- **INCREASE QUALITY OF THE CUSTOMER SERVICES.**
- **CHECK INTERNET PERFORMANCE AND SPEED .**
- **PAY ATTENTION ON THE BILLING AND PRICING.**

# FINDINGS

## IV COMPLAINT BEHAVIOR EXPLORATION





# FLASK DEMO



## CUSTOMER SERVICE PORTAL

Let us know what's troubling you

Comcast Not Working  
And No Service To

Send

# FLASK DEMO



Sir/Madam,  
Your complaint is of category 'Network & contact us:(XXX)XXX-2420'

Thank you,Have a nice day!!!!

# **PRACTICAL USE OF APP**

## **➤ INSTANTLY CLASSIFY A COMPLAINT**

- **FASTER RESPONSE TIME TO CUSTOMER**

## **➤ FREE UP MANPOWER ON ROUTINE TASK**

- **GREATER EFFICIENCY**

## **➤ ORGANIZE COMPLAINT WITHOUT READING THEM**

- **REDUCE STRAIN ON CUSTOMER SERVICE DEPARTMENT**



# **FUTURE WORK**

## ➤ **TOPIC SUMMARIZATION FUNCTIONALITY**

- **PROVIDE SHORTER ABSTRACT OF COMPLAINT**

## ➤ **COMPLAINT PRIORITIZATION**

- **PRIORITIZE ANGRIER –SOUNDING COMPLAINTS.**