Comcast Telecom Complaints Data Analysis

**Introduction**

This report analyses customer complaints data for Comcast Telecom. The aim is to complaint trends, types, resolution rates, and key insights by state and channel. The analysis uses data cleaning, feature engineering, classification, visualization, and summary statistics to extract actionable insights.

**1. Data Import & Cleaning**

The dataset was imported from CSV and cleaned:

* Column names were standardized.
* Dates were parsed to handle both "dmy" and "mdy" formats.
* Time columns were combined with dates to create precise timestamps.

**2. Feature Engineering**

Additional features were created to facilitate analysis:

* Complaint status and received channel fields were standardized (title case, trimmed). Statuses were grouped into two categories: **Open** (including "Pending") and **Closed** (including "Solved").
* Month and day variables were extracted the parsed date for trend analysis.

**3. Complaint Type Classification**

A custom function was developed to classify each complaint into one of several types based on keywords:

* Internet
* Billing
* Customer Service
* Data Cap
* Monopoly/Competition
* Other

This allowed for more granular analysis complaint themes.

**4. Exploratory Data Analysis**

4.1 Complaint Type Frequency

The most common complaint types are:

| **Complaint Type** | **Count** |
| --- | --- |
| Internet | 671 |
| Other | 574 |
| Billing | 554 |
| Customer | 237 |
| Data Cap | 165 |
| Monopoly/Competition | 23 |

4.2 Monthly Complaint Volume

The number of complaints per month was calculated and visualized. There is a clear spike in June 2015.

**[Insert Plot: Monthly Complaint Volume]**

4.3 Daily Complaint Volume

Complaints per day show a similar pattern, with a notable peak in mid-2015.

**[Insert Plot: Daily Complaint Volume]**

was analyzed for each state. Georgia had the highest number of complaints overall.

**[Insert Plot: State-wise Complaint Status]**

* **Resolution rate via Internet:** 76.3%
* **Resolution rate via Customer Care Call:** 77.2%

**6. Conclusion**

* The majority of complaints are related to Internet issues and billing.
* Most complaints are resolved, but some states have a higher proportion of cases.
* Both Internet and Customer Care Call channels have similar resolution rates.
* There was a significant surge in complaints in June 2015, which may warrant further investigation.

**7. Appendix**

* The frequency table of complaint types has been exported as complaint\_type\_frequency.csv.
* All code and analyses are available upon request.