



# UNITED HACKATHON AIRLINES

Fly the Friendly Skies

K H U S H I   J A I N  
A R Y A N   S H U K L A

Department of Computer Science  
University of Delhi

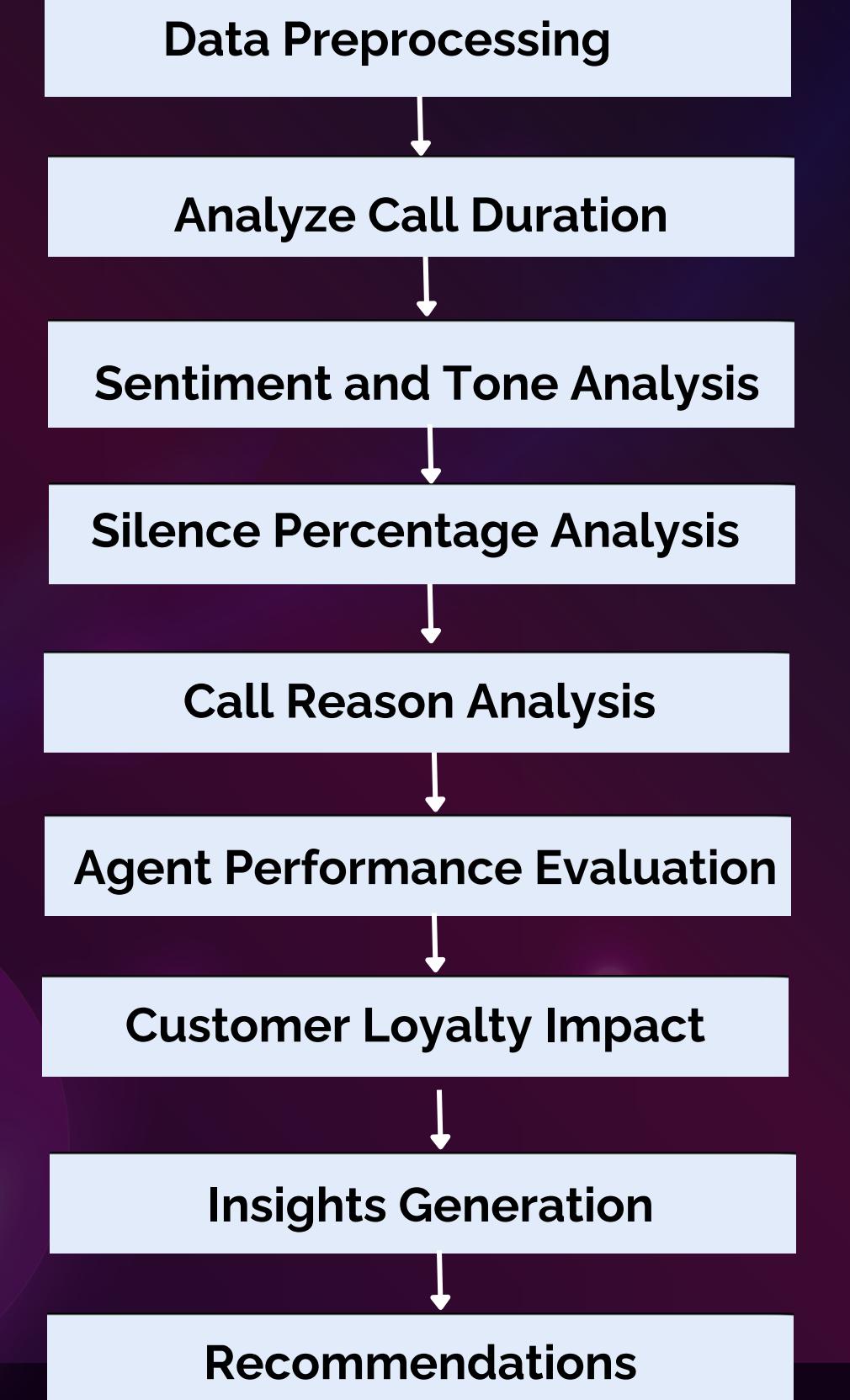
# DELIVERABLES &

# WORKFLOW

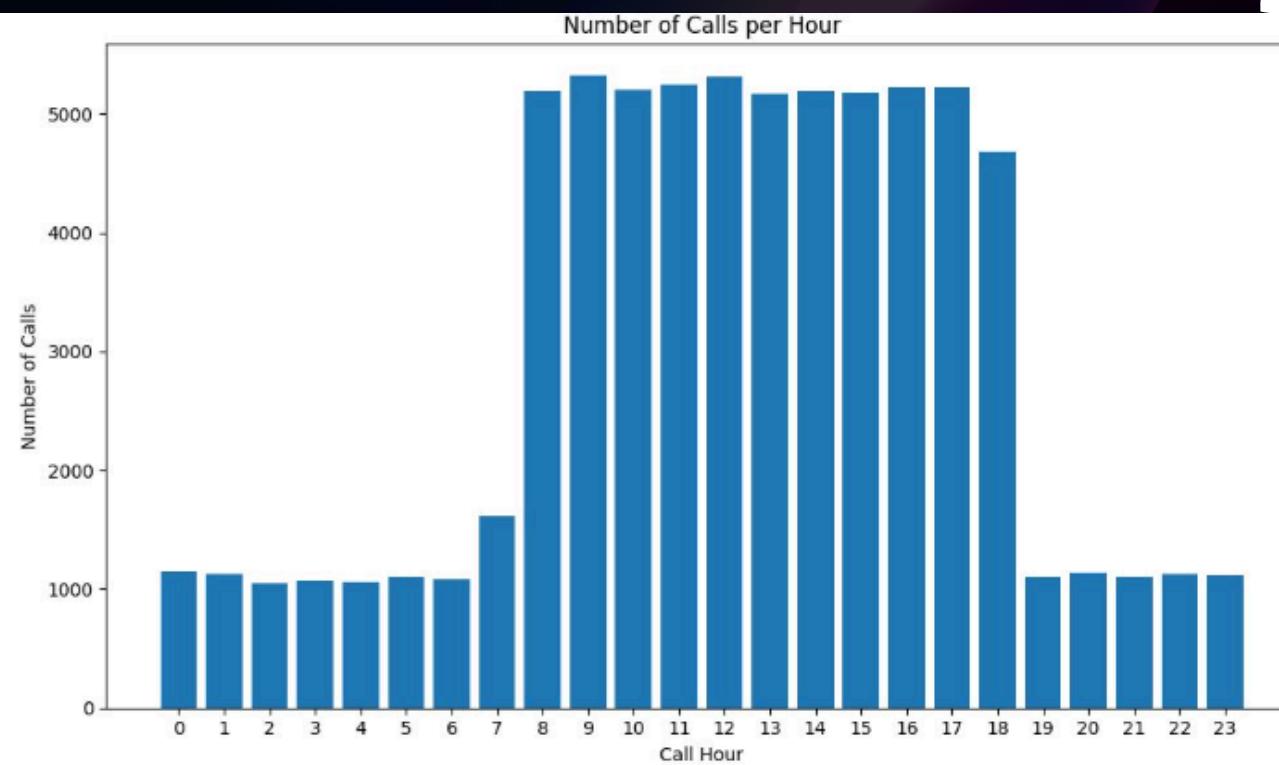
**Key Factors contributing to extended call durations**  
Key drivers of long AHT and AST quantify the percentage difference between the average handling time for the most frequent and least frequent call reasons

Analysing transcripts and call reasons to identify granular reasons that could be resolved via self-service options in the IVR system. Improvements to the IVR options to effectively reduce agent intervention in these cases.

Understanding the primary reasons for incoming calls and accurately categorizing call reasons.



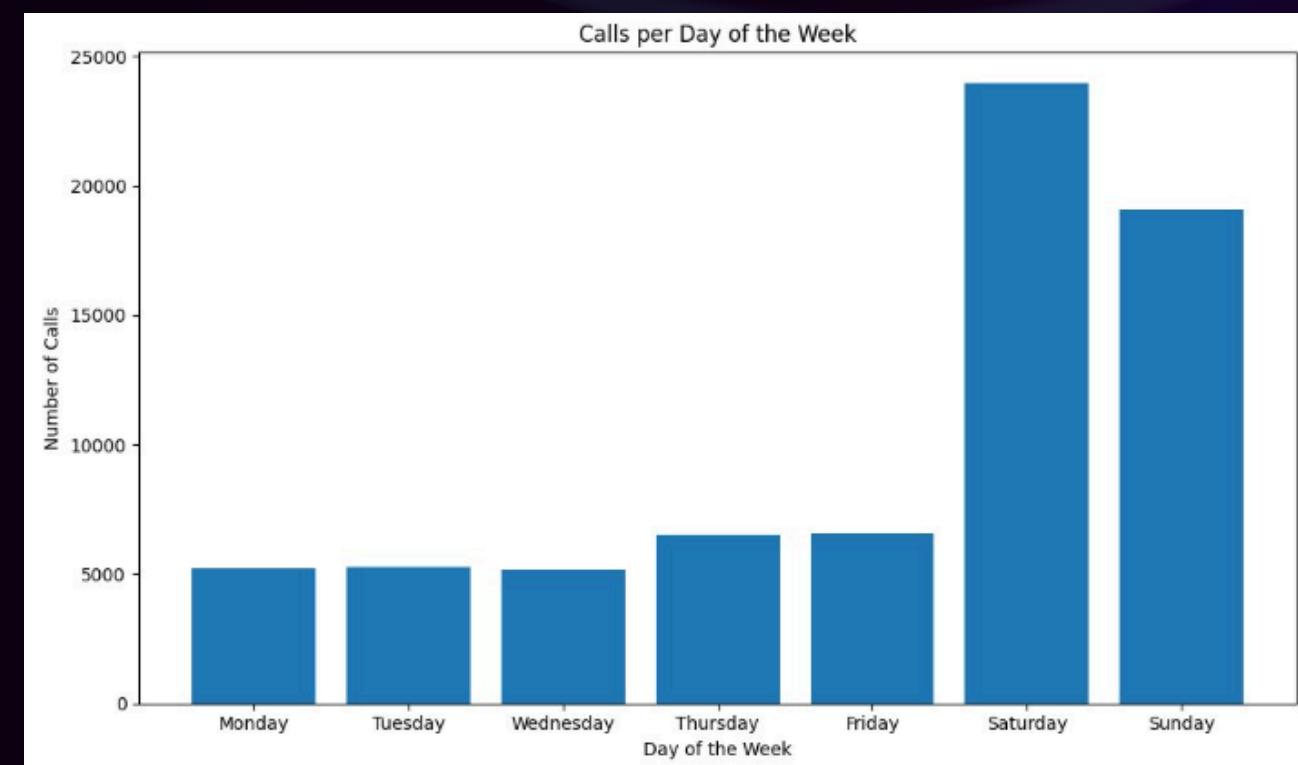
## 1.1 HIGH VOLUME CALL PERIOD



Peak hour is 9 AM - 10 AM

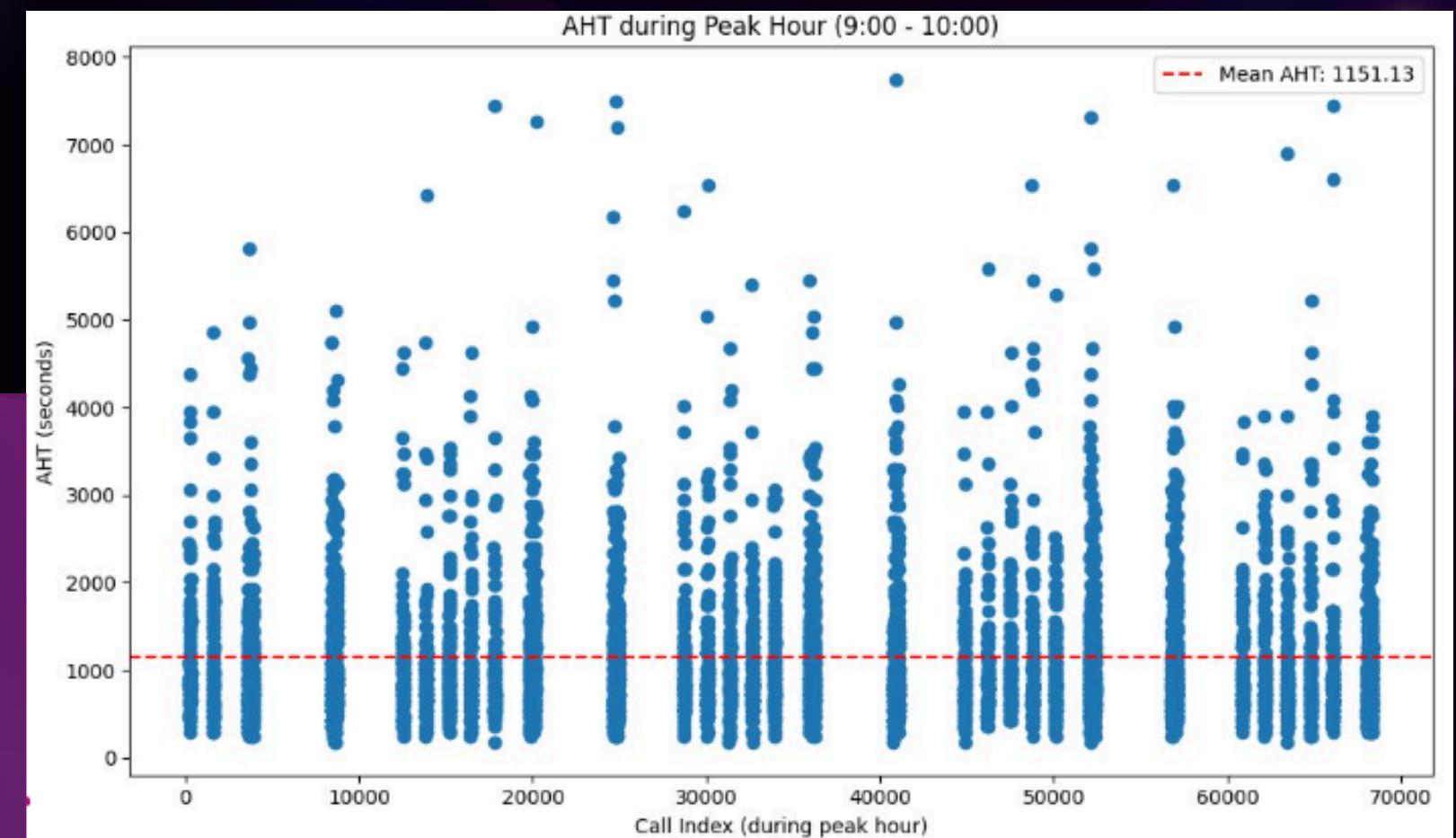
**Staffing Needs** :- Can schedule more agents during peak times to reduce wait times and improve customer satisfaction.

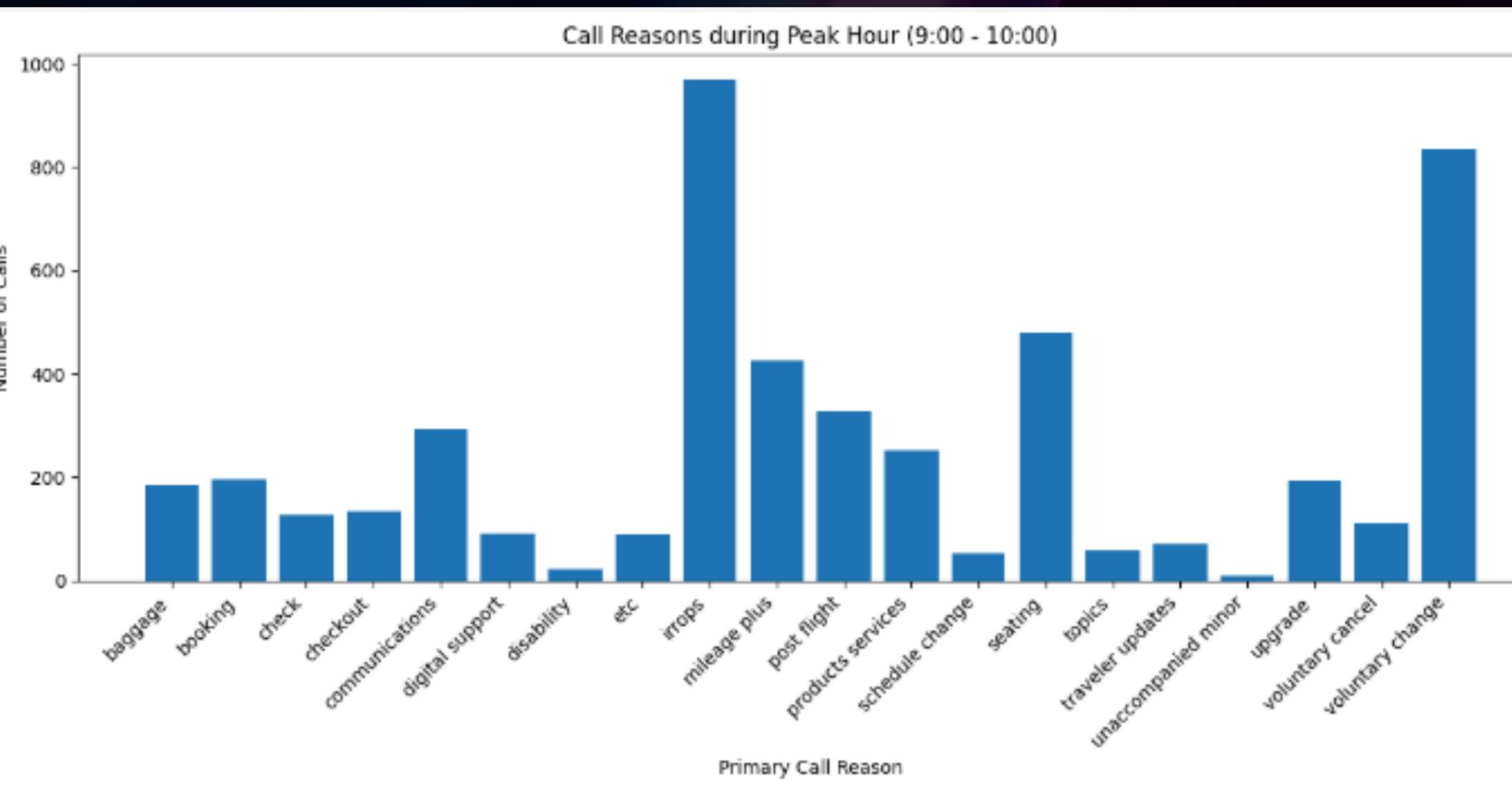
**Cross-Channel Integration** :- can consider increasing support on other channels (like chat or email) during these times to provide a seamless customer experience.



Maximum calls received on Saturday

During peak hours majority calls have AHT less than mean AHT, implies straight forward queries that can be routed through IVR





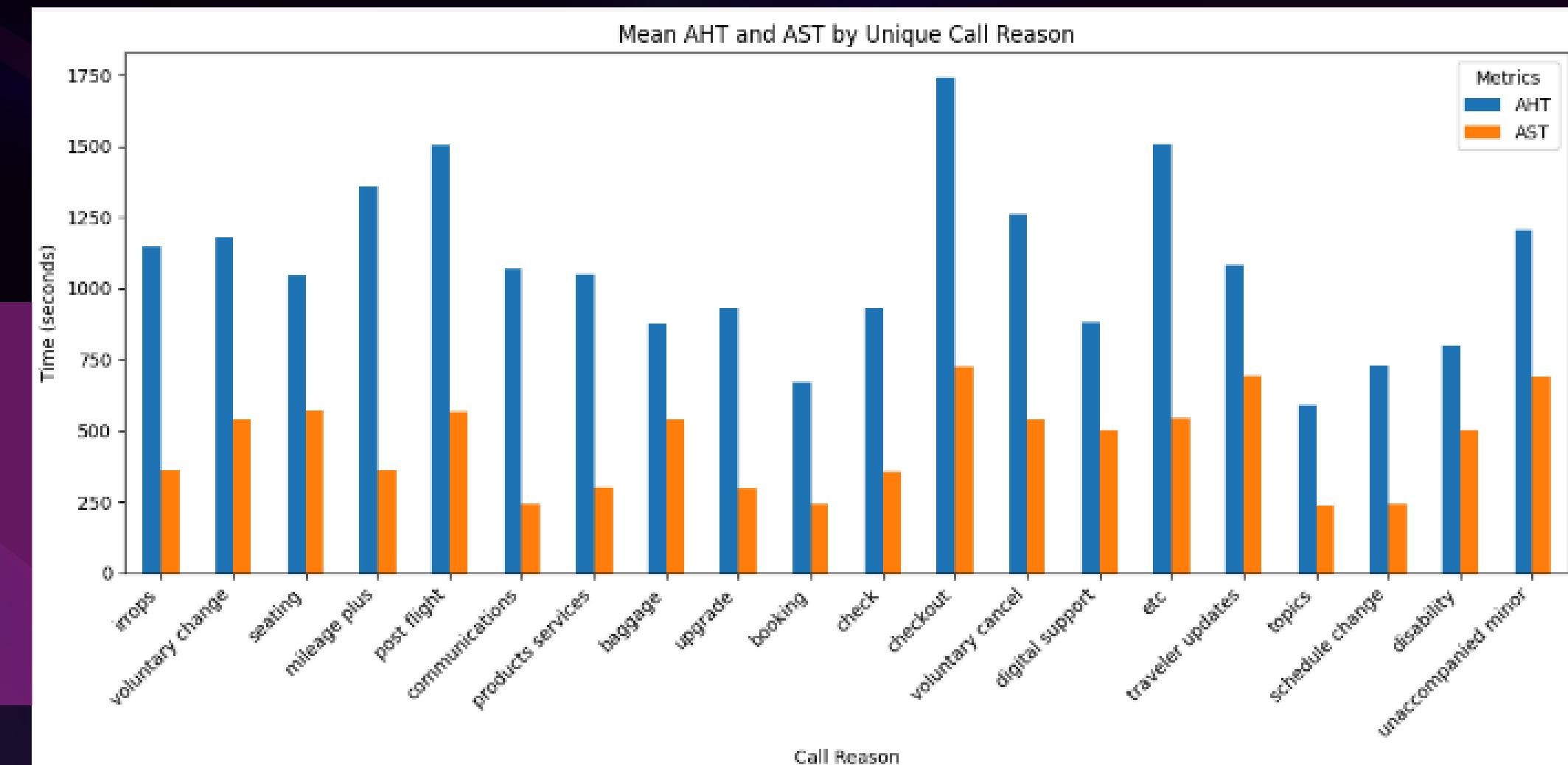
Maximum calls during peak hour are related to irrops and voluntary change.

Proactive Communication: Enhance proactive communication strategies during these peak times to inform customers about irrops and minimize confusion or frustration, it can include:-informed mai,Informed IVR calls,informed watsapp and normal SMS.

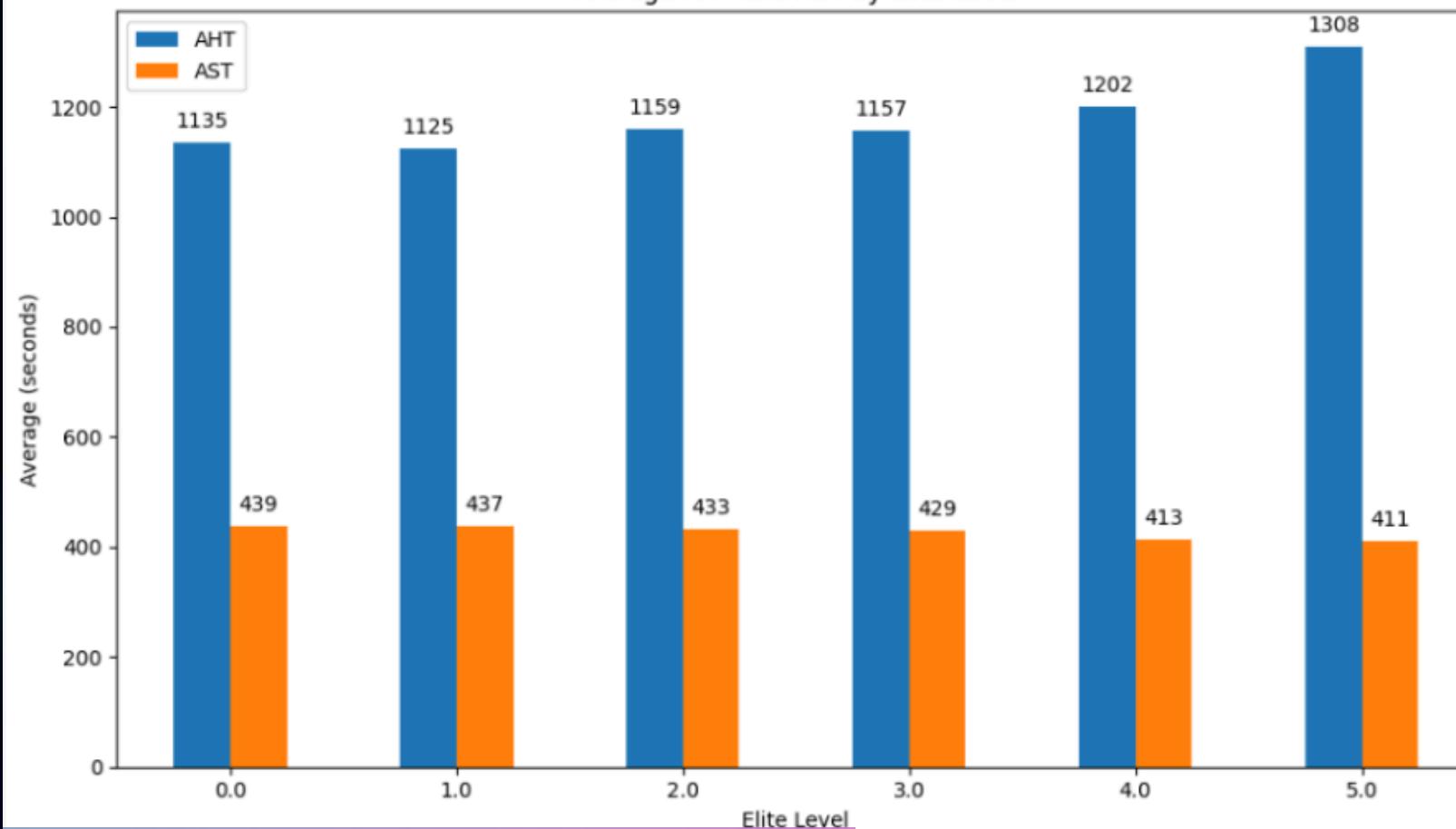
Real-time Updates: Real-time updates functionality in website regarding irrops can help keep customers informed and potentially reduce the number of calls.

## 1.2 KEY DRIVERS OF LONG AHT AND AST

**Checkout** related queries require the most time to handle and have the longest wait times, while **topics** is dealt with most efficiently. These insights can guide resource allocation and process improvements in the call center to enhance overall service efficiency.

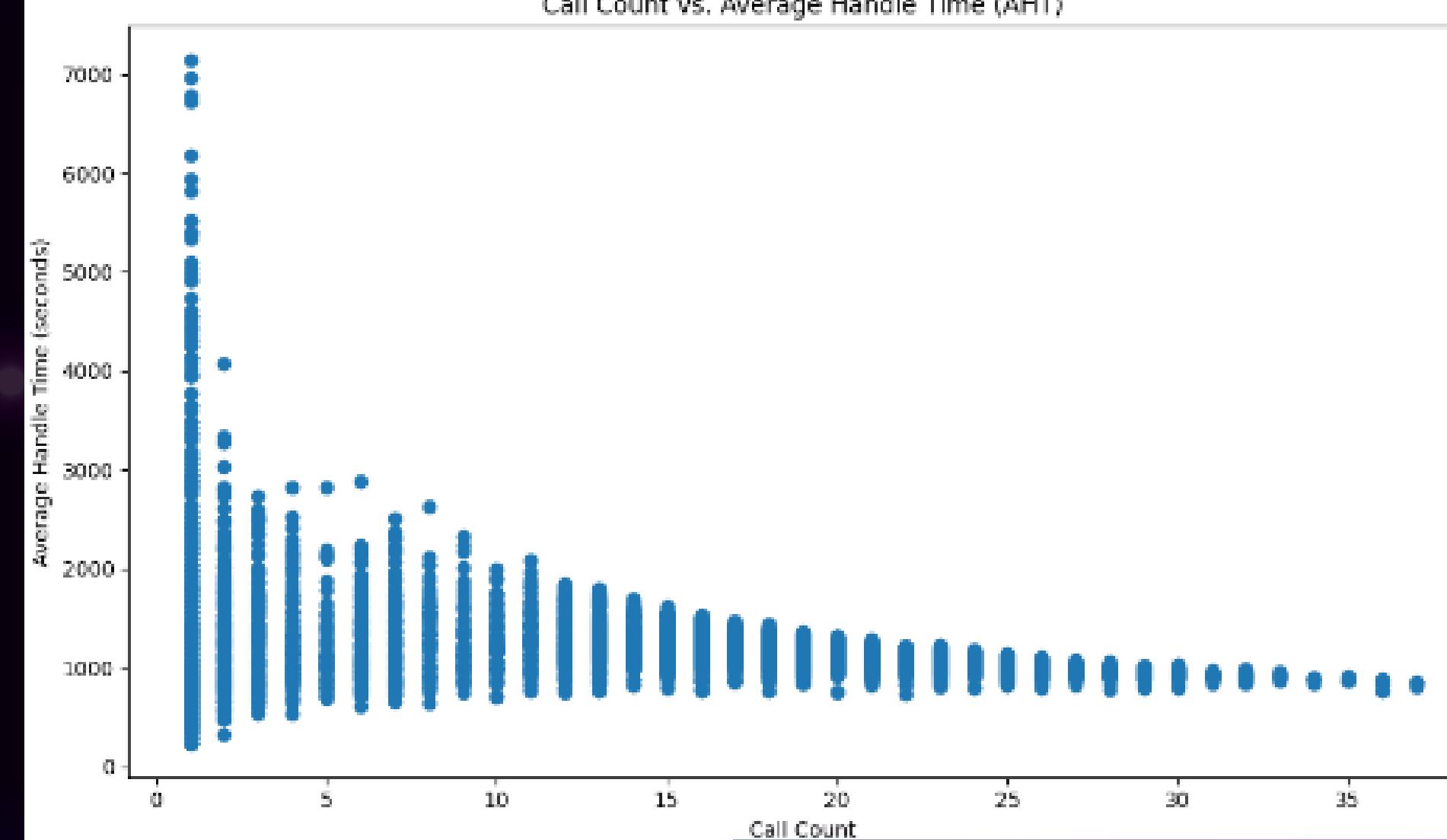


Average AHT and AST by Elite Level

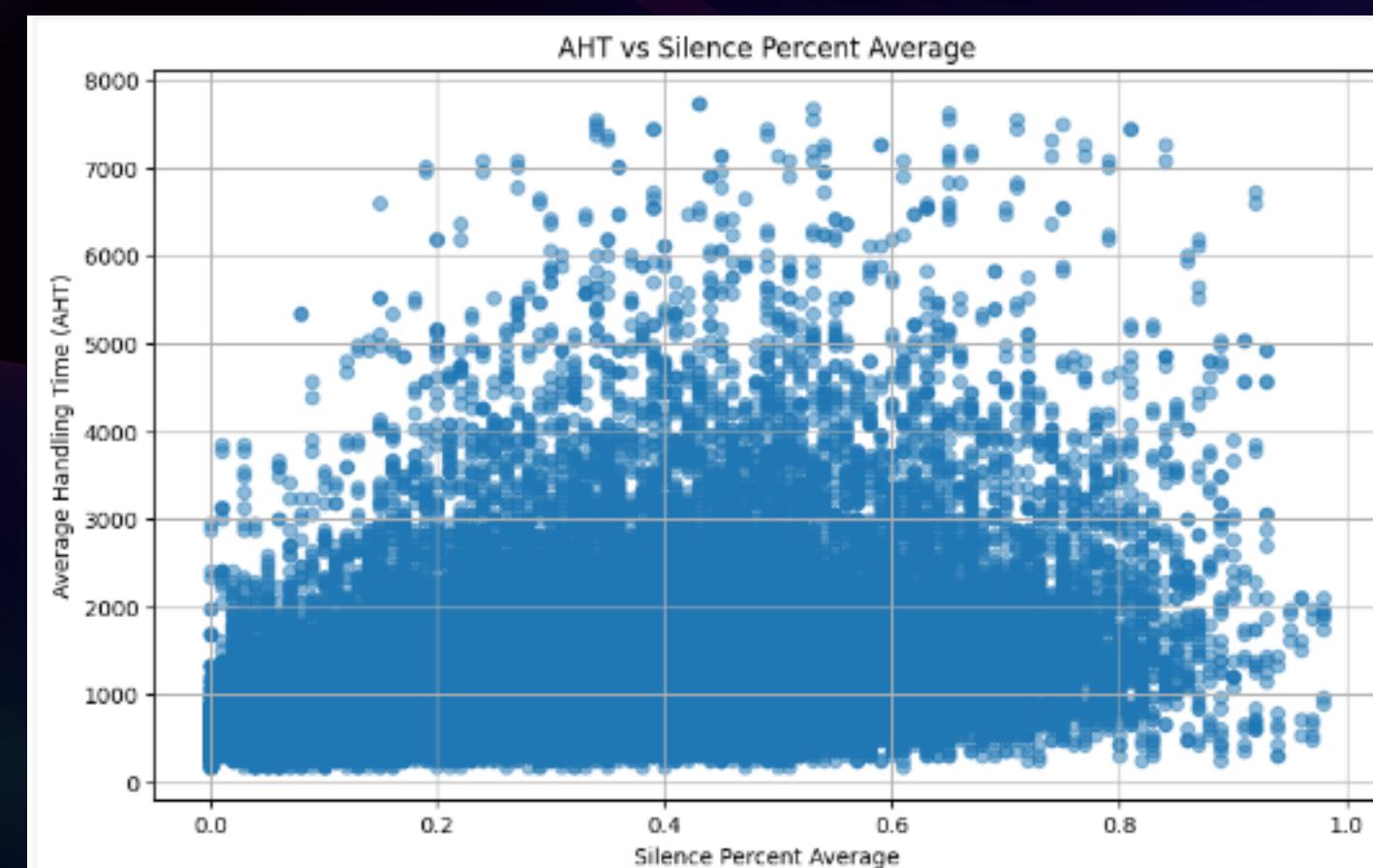


AHT is directly proportional to customer elite level code  
AST is inversely proportional to customer elite level code  
Thus some maximum time limit criteria should be kept so that after maximum duration client's call is disconnected and is connected later after peak hours, this will also reduce AST

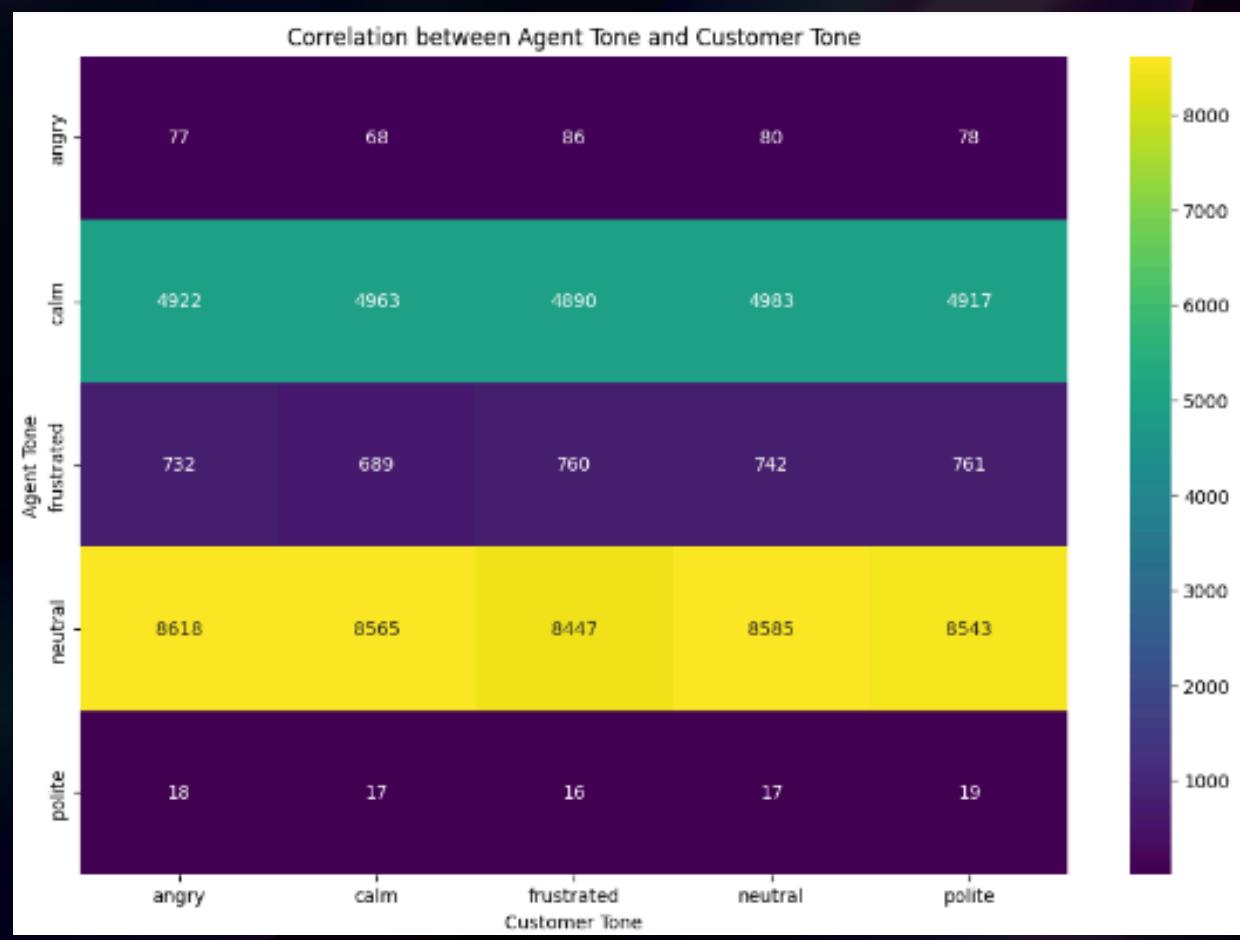
Call Count vs. Average Handle Time (AHT)



If AHT of call is less this allows agent to handle more calls

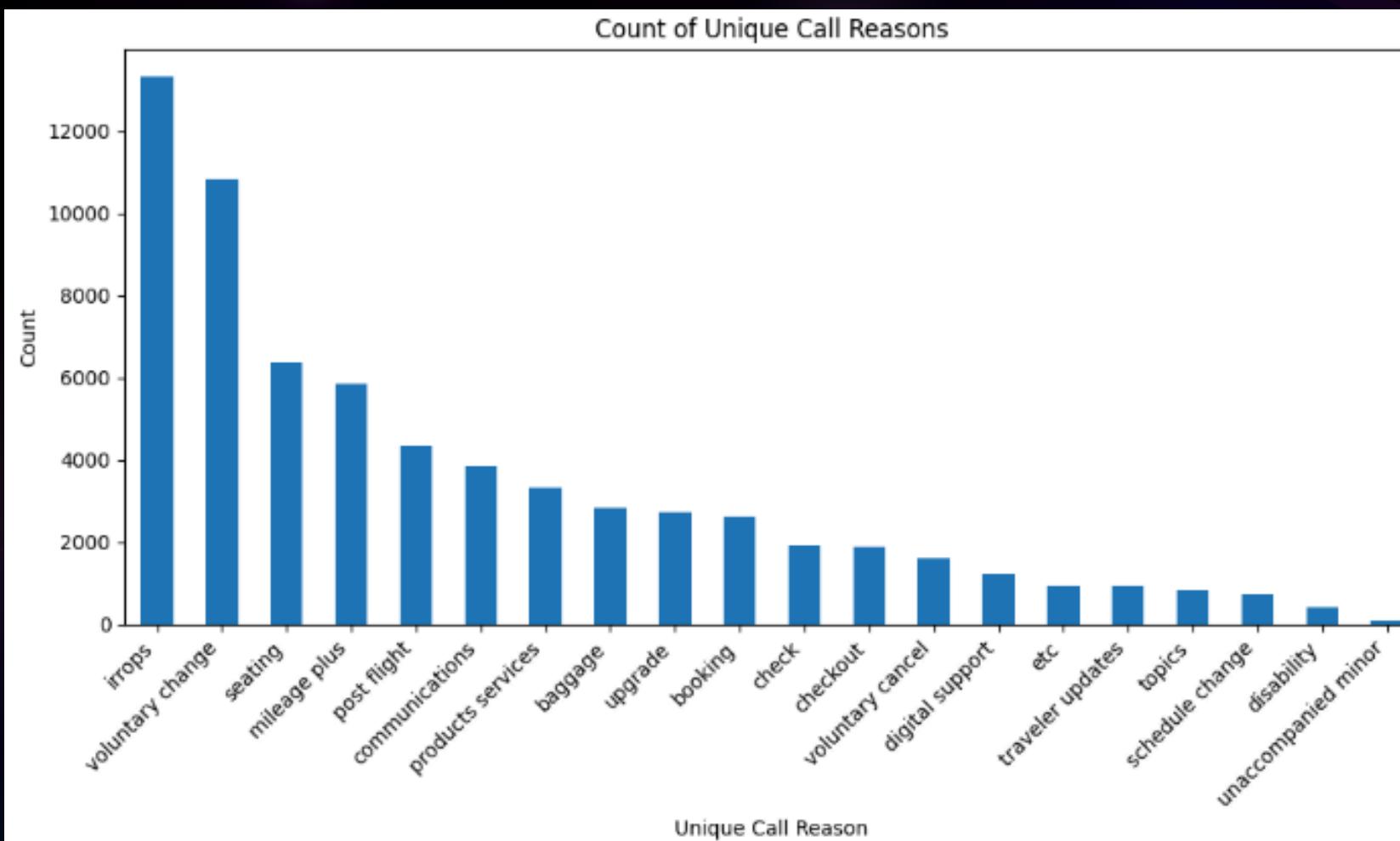


For higher AHT silent percentage is more implies agent takes too much time to ans query



1. Neutral and Calm Interactions dominate, with agents often responding in a neutral or calm tone, regardless of the customer's tone.
2. Frustrated or Angry Customers are relatively rare, and even then, agents typically stay calm or neutral, demonstrating professionalism.
3. Polite Interactions are the least frequent, suggesting that politeness is less common from both sides during calls.
4. Calm Responses from agents are most common when the customer is calm, showing alignment between customer and agent demeanor in these cases.

## 1.3 PERCENTAGE DIFFERENCE AHT FOR MOST FREQUENT AND LEAST FREQUENT CALL REASONS

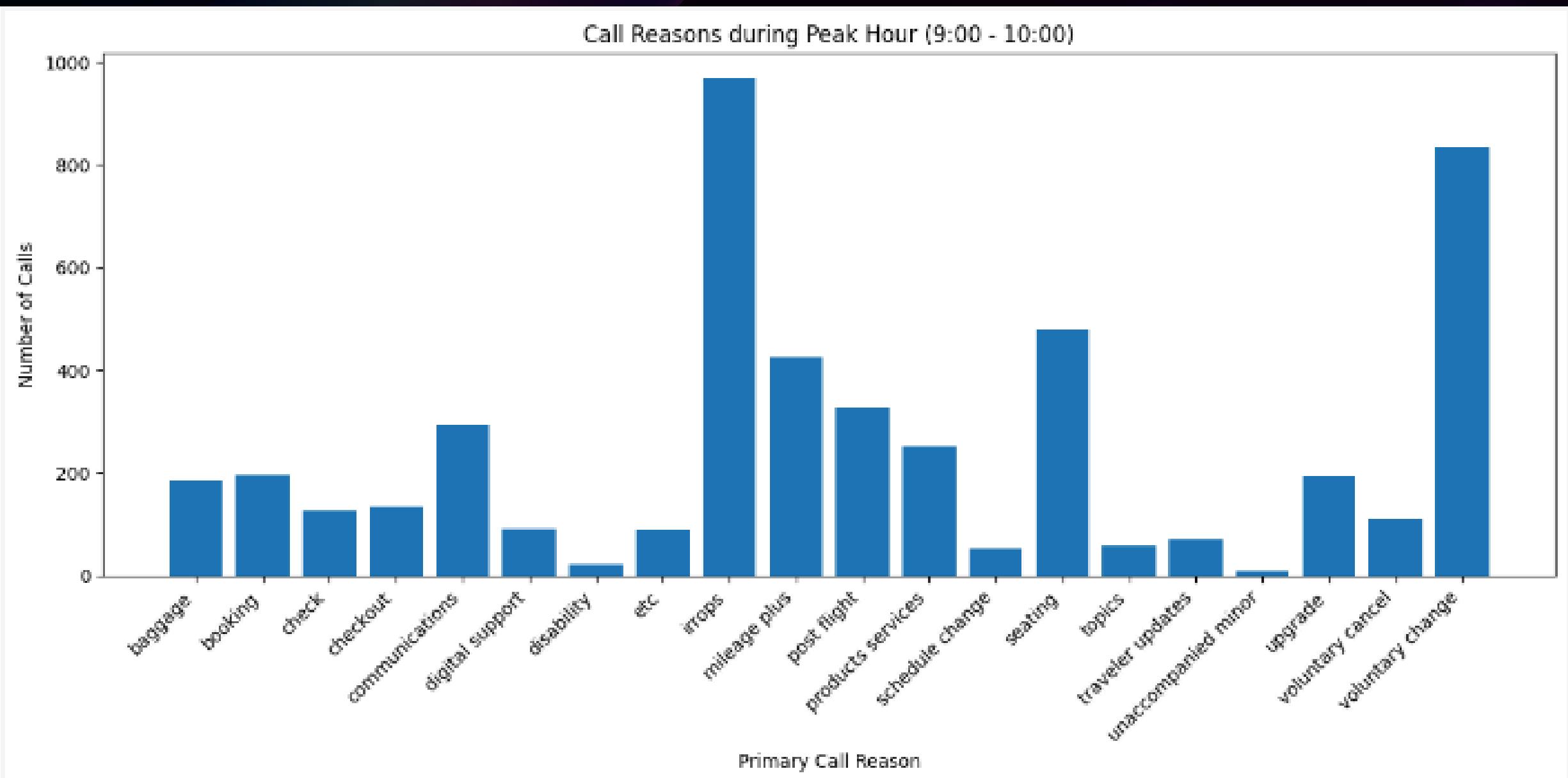


Most frequent call reason is irrops  
Least frequent call reason is unaccompanied minor

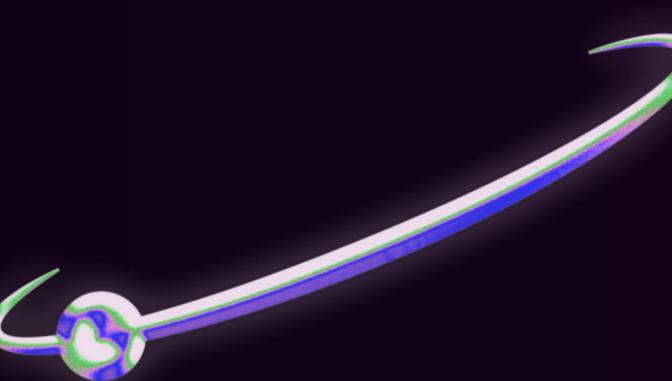
Percentage difference in AHT between most and least frequent reasons: -5.16% -> This indicates that most frequent reason take 5.16 % lesser time on average than those for least frequent reasons

Percentage difference in AST between most and least frequent reasons: -47.68% -> This indicates that most frequent reason take 47.68 lesser speed on average than those for least frequent reasons

## 2.1 REASONS THAT COULD BE RESOLVED VIA SELF-SERVICE OPTIONS IN THE IVR SYSTEM



This graph illustrates the distribution of call reasons during the peak hour of 9:00 - 10:00. The most frequent call reason is **irrops** with nearly 1000 calls, suggesting it may be a catch-all category for miscellaneous issues. **Voluntary change** is the second most common reason, with over 800 calls. The least common reasons include **disability** and **unaccompanied minor** with fewer than 100 calls each. This information could be crucial for staffing decisions, training focus, and potentially streamlining frequently occurring issues to improve overall call center efficiency during peak hours.



## Smart Call Assist



## 2.2 IMPROVEMENTS TO THE IVR OPTIONS TO EFFECTIVELY REDUCE AGENT INTERVENTION

### Simplified IVR menu

Multiple nested sub-menus and options leads to confusion

### Proactive IVR Messaging for Common Issues

Implement proactive messaging for known recurring issues based on data from previous calls.

### Offer Enhanced Self-Service for Technical Support

Provide step-by-step troubleshooting guides directly in the IVR system for common technical problems.

### Real-Time Information

Ensure the IVR system provides real-time updates on flight status, gate changes, and delays, directly pulling data from airline systems.

### Include Emotional and Sentiment Detection

Use sentiment analysis in the IVR system to detect customer frustration early in the call and adjust the interaction accordingly.

### Enhanced Natural Language Processing (NLP)

Implement advanced NLP to allow passengers to speak naturally rather than using rigid commands, making interactions smoother.

## 3.1 PRIMARY REASONS FOR INCOMING CALLS

### Irrops (Irregular Operations)

These situations often involve complex itinerary changes or disruptions, requiring personalized solutions and immediate decision-making by agents.

### Voluntary Change

Passengers making voluntary changes to their bookings may need advice on fare differences, alternate routes, or other options, which are better handled by a human agent for flexibility.

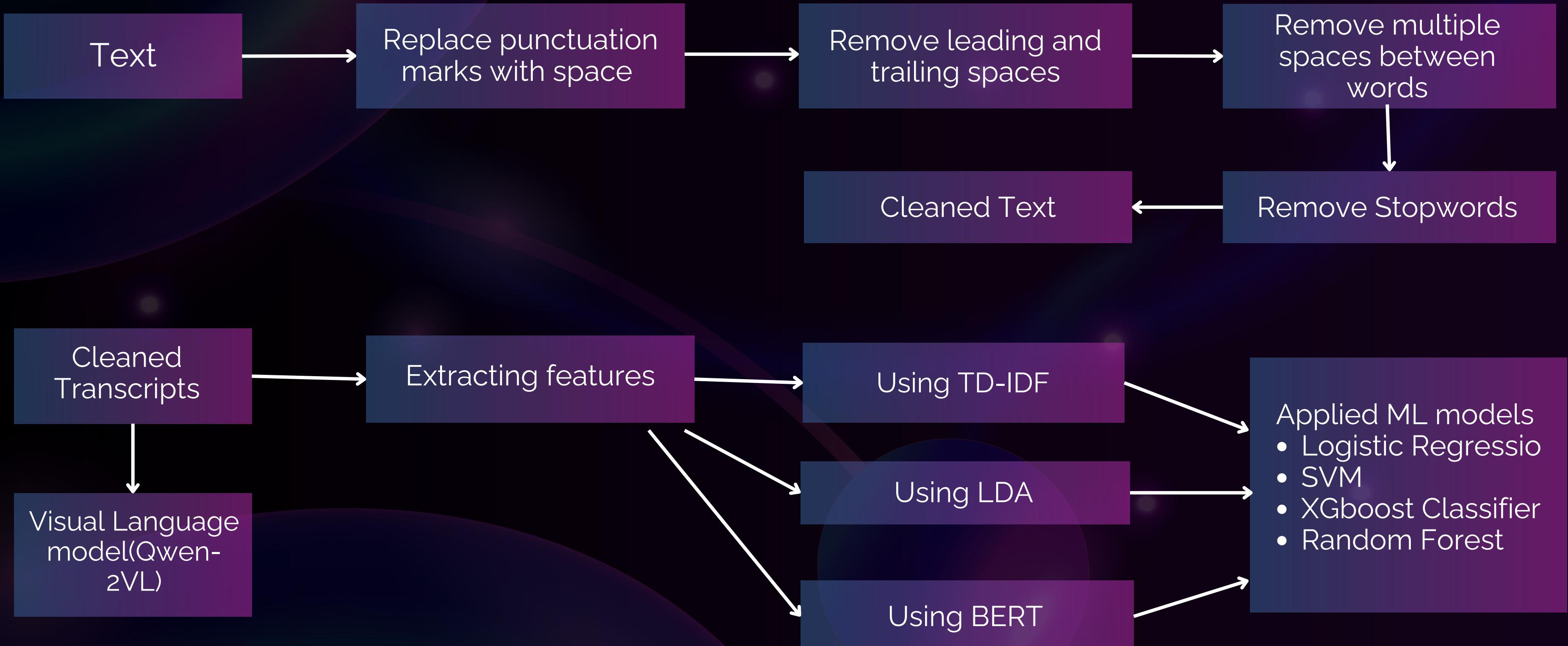
### Seating

Seat changes, upgrades, or special seating requests often involve specific availability or preferences that require agents' real-time assistance to meet customer needs.

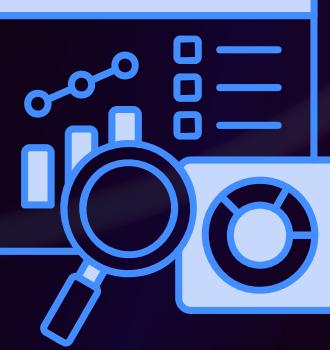
### Mileage Plus

Queries related to frequent flyer accounts can involve complex adjustments, point redemptions, or discrepancies that require secure, personalized handling by an agent.

# ANALYSING CALL TRANSCRIPTS



# SUPPORTING MATERIALS



- <https://github.com/Aryanshukla206/SKYHACK-2.0-United-Airlines>
- <https://analytics.zoho.in/open-view/3869330000000002289>
- <https://analytics.zoho.in/open-view/3869330000000002484/abe1285bcde8e21cefe45fa7b53a53e8>
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THANK YOU!