

Airport traffic system analysis for better capacity planning and control traffic flow to avoid delays and congestion

Description

Monitor and understand the traffic flow at the Airport terminals, understand the effects of changes like traffic congestion, accidents before they happen, and manage traffic with greater precision than ever before.

Live streaming view of road traffic of different camera views to understand the lane wise vehicle count, traffic congestion and vehicle speed which helps to provide a quality of traffic service to the commuters to the Airport.

Challenge

- Monitor live traffic and holistic view of airport roadways to pinpoint congestion and accidents to keep the traffic flow moving smoothly. Analyze the pattern and trends to predict the LOS to provide better Service levels to evaluate the performance of the traffic flow.
- Capacity planning to operate maximum number of vehicles to pass through by measuring the volume, speed ratio, occupancy to build a better traffic management system to reduce delays and improve road safety.
- Real time monitoring of the camera status and predict the Level of Service (LOS) of various camera lanes installed at the terminals to alert the traffic flows. To understand the

entire traffic networks at all the terminals so as to make the appropriate changes and plan the capacity.

Solution

- Customer required a solution to monitor the traffic flow/congestion across the airport roads and the lanes. Data is collected from various cameras across all the lanes, processed, displayed and stored in data warehouse.
- The solution provides all the road view of the airport and various cameras available at all the roads, quick alerts are shown in cameras if there is any abnormality like accidents, congestion, breakdown, speed violations. User can further dig down to details by clicking the camera and be able to view the live video of the camera feed.
- Monitor the level of service trends at all the lanes and predicted LOS for the next 1 hr which helps in better service. The live camera will show the speed of each vehicle in all the lanes of specific camera view and also displays the speed % , occupancy % and LOS of each lane. Highlights the lanes in case if there is any deviation in the LOS.
- Provides an overview of passengers at the airport by segmentation by type, spending distribution, drill down to spend time in each retail type at the airport.

Benefits

- Manage congestion and improve safety across the key lanes of the Airport roads, deliver on-demand traffic data, analytics and visualizations that can help you improve roadway performance.
- Improving and optimizing the LOS at all airport roads, by planning the capacity of the vehicles that could pass through a specific lane without the traffic density being so great as to cause unreasonable delay.
- Provide an appropriate service level at Airport terminals for designing new facilities or for improving the operational performance of the existing facilities to provide good service and expectations to airport passengers.
- Save time and money by predicting traffic before it happen and create a seamless traffic flow and avoid delays caused by traffic congestion and accidents.