

Analytics for Theme Park Management

Andrea Otero

University of Central Florida

Background

The economy of a country operates in an environment that is subject to factors such as tourism. With the industry of tourism quickly expanding, it is crucial to detect ways to build enhanced management systems to deliver more fast-paced services with higher quality and fewer employees. Simulation as Analytics tools would provide frameworks that will help predict future behavior patterns in tourism places of high frequency, like hotels or theme parks. By utilizing behavioral and demographic data patterns in a theme park setting we will try to detect these frameworks and help predict the patterns of movement within the theme park thus achieving an improvement on park flow, expediting service to customers, keeping customers happy, and reducing the risk of over/under supply keeping balance over loss versus profit. Simulation can help to plan effectively for the optimum capacity to serve visitors needs efficiently.

Purpose

The primary objective of this research is to use simulation to evaluate options for reducing wait-time experienced at theme parks, increasing the performance and customer service in theme parks. Accurately estimating the performance of each part of the park will be a critical component of the analytics work. Developing a simulation model will help to understand about the behavior and demographics of customers. The simulation model will represent the key characteristics or behaviors of visitors in theme parks.

Design/Method

It is necessary to assess the expected length of queue and waiting time in each part of theme parks to avoid long queues and meet the customer satisfaction. In this research, we use simulation to estimate the expected time and number of customers in a queue in theme parks. This study uses Any Logic 6.8.1 to build a simulation model in order to identify alternatives that reduce the theme park's congestion.

Results

The quantitative and analytical results of simulation in theme parks will be alternatives to reduce waiting time in system in theme parks, estimate the performance of the system. The dynamic nature of simulation allows seeing results across the whole theme park. It's not just for a single period, It can be projected over an hour, a week, whenever. Whether it's a high waiting time or low revenue, simulation results enable us to accurately identify the area to improve.

Conclusions

The objective of this study is to evaluate options in order to reduce wait-time experience at theme parks using simulation. The output of the simulation technique would be alternatives to enhance the performance and customer satisfaction in theme parks. Therefore, we could allocate resource effectively, manage costs efficiently, and initiate plans to increase capacity.