

## **Optimization Study: Bolt Food Delivery**

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### **Abstract**

Bolt, referring to the speed of bolt, is a Saudi delivery company, delivering goods internally throughout the kingdom. It was founded by a group of women who did not always have enough time on their hands to leave their homes for groceries, medicines or meals. Therefore they have decided to create a delivery company for the sole purpose of delivering food from restaurants to the consumer. The company was launched in May of 2016 before many new delivery companies began taking toll throughout the city. Bolt mainly does two things, deals with restaurants varying from fast food to gourmet, and employs drivers that fall within a certain age group of (25-45) to ensure a certain level of service. Bolt then takes these two things and combines them allowing for a seamless food experience. Orders are done through the Bolt app on the mobile phone, and a delivery is quickly at your door.

Bolt Food Delivery is a company mainly looking over food deliveries from different restaurants to different people around the kingdom. The company holds a large employee fraction of employees and signs deals with over 50 restaurants. Today, the company has employed us as engineers to analyze an optimization study. This optimization study will allow for the company to be able to make more informative decisions on how their company should steer from now on

Taking into account the cost, revenue and hence profit of different optional services will allow us to be able to look at what point profit is maximized and hence make decisions on where changes should be made. Primarily our first objective was to maximize profit in the most efficient way. Our second objective was to denote the company's present worth for an investor's purchase.

Since Bolt's daily goal is for each driver to complete 15 deliveries per day, controlling the delivery time and the number of drivers will deem the most effective when it comes to the overall profit. Bolt aims to maximize their profit in order to improve their delivery service, therefore the reexamination of their choice of delivery time and the number of drivers will be based on the most ideal results found by different methods of data collection and analysis. A number of conclusions were drawn as a result of this investigation. This study may be reevaluated on a continuous basis, giving managers the flexibility to run on what-if scenarios and gain meaningful insight into the impact of resource changes on profitability.

Tackling the uncertainty of today's international economy on the cusp of the twenty-first century, as well as technology innovation and other competitive forces that combine in a complex manner, complex decision-making problems arise. It is difficult to create a schedule that is both practical and cost-effective. As a result, organizations benefit from the acquisition of analytical methods like excel and associated software for analyzing and manipulating huge organization operations and production data.