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Fundamentals of Data Analytics with Tableau – Smart Bridge
Voyage Vista: Illuminating from Uber Expenditionary Analysis

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1.Introduction

1.1. Overview

Uber is a multinational transportation network company that operates a ride-hailing platform. It was founded in 2009 by Garrett Camp and Travis Kalanick and is based in San Francisco, California. Uber provides a convenient way for individuals to request rides from drivers who use their own personal vehicles.

Uber Driver Analysis refers to the Analyzing the number of trips taken by Uber drivers can provide insights into their overall activity and the demand for rides in specific areas. Daily, Weekly, or Monthly Analysis: Uber's data can be analyzed on a daily, weekly, monthly basis to understand the trends and patterns of trip volumes. This analysis can help identify peak hours or days of high demand and optimize driver availability during those times. Trips can be analyzed based on geographic regions or specific cities to identify areas with higher demand. This analysis can help Uber drivers decide where to focus their driving efforts for maximum efficiency and profitability. The Major of our project is to use data Analyzing techniques to find unknown patterns in the Uber Drives dataset. The research is carried out on Uber drives data collected from the year 2016.

First: Developing our strategy

Our audacious goal was to build a holistic insights solution that could consistently deliver global and actionable insights to inform Uber's priorities. While the expectation from stakeholders and leadership was to create a database to house insights, our strong belief has been that without mobilizing the necessary people and methodologies to gather, synthesize, and leverage those insights, the database would be ineffective. You can build the biggest library in the world, but without librarians and a card catalog, it's pretty useless: without the people and process to leverage the database, impact would fall short.

Second: Establishing a unified insights taxonomy

Our first step was to develop an insight structure that anyone could use to import or export data. Because insights come from a wide range of data and sources, with

functions responsible for different types of insights, we needed to define a unified way to navigate the data.

Third: Understanding internal users' needs and motivations

The insights database exists to help Uber employees build better products and programs. We sought to establish a foundational understanding of our users through work sessions and user research, eventually arriving at two key user groups to design for: "insights creators" (who generate insights from various sources) and "insights consumers" (who use insights for learning and informing decisions). We conducted several rounds of initial 1-on-1 interviews to understand the common needs and motivations for each group, and then followed up with iterative usability research. Users continue to help us prioritize feature development for the tool and our program.

Fourth: Identifying partners, piloting processes

Since this is our first cross-functional tool for insights and document discovery, we needed to establish an ongoing process for engagement. We conducted a few pilot programs to gather insights with our team of 90+ UX researchers. The purpose of these pilots was to test out the insights taxonomy, the approach without any custom tools, and the type of guidance users needed. Once we defined the process of submitting insights, we established a network of insights creators who shared common beliefs about knowledge sharing.

Fifth: Developing the minimal viable product, then iterating

Concurrent to the pilots, we built a simple MVP using external database software. With our MVP, we were able to bring to life the concept of the tool. Through some initial trials, we realized that the software itself posed too many usability limitations. Through iterative user testing, we developed a design brief for the next iteration, which dramatically improved the user experience of our insights tool, generating awareness and excitement from users across the company at a company-wide launch. We continue to develop important features and functionality guided by our original vision and based on feedback from users. We are also integrating our insights database with other internal collaboration tools to optimize engagement and grow our platform of tools to serve existing workflows.

1.2. Purpose

This analysis can help Uber drivers decide where to focus their driving efforts for maximum efficiency and profitability. The Major of our project is to use data Analyzing techniques to find unknown patterns in the Uber Drives dataset.

The flexibility and lower cost of Uber, plus the various ways it provides superior customer service, matter too, as does the fact that all transactions are credit card based. Customers and drivers need not carry cash, making them less likely to be robbed while looking for and accepting a ride.

How does Uber use data analytics?

Uber uses a mixture of internal and external data to estimate fares. Uber calculates fares automatically using street traffic data, GPS data and its own algorithms that make alterations based on the time of the journey. It also analyses external data like public transport routes to plan various services.

Uber is a transportation company with an app that allows passengers to hail a ride and drivers to charge fares and get paid. More specifically, Uber is a ridesharing company that hires independent contractors as drivers.

1. Improve the Support Experience

Mining users support interaction helps us recognize the top issues faced, as well as the efficacy of their support resolution. For example, analysis of user and support staff interactions has helped us identify patterns that can be automated, such as one-touch agent resolutions. Automating such interactions saves time and effort for users by providing them the same resolution instantly.

2. Optimize the Support Processes

Support data also helps us improve our operational processes, such as improving our knowledge base, managing workforce allocation, training the support staff, etc. For example, we can identify a surge in certain support issue types and notify the relevant agent workforce management teams to prepare for the increased volume of inbound issues by increasing staffing, etc. At Uber scale, minor efficiency gains such

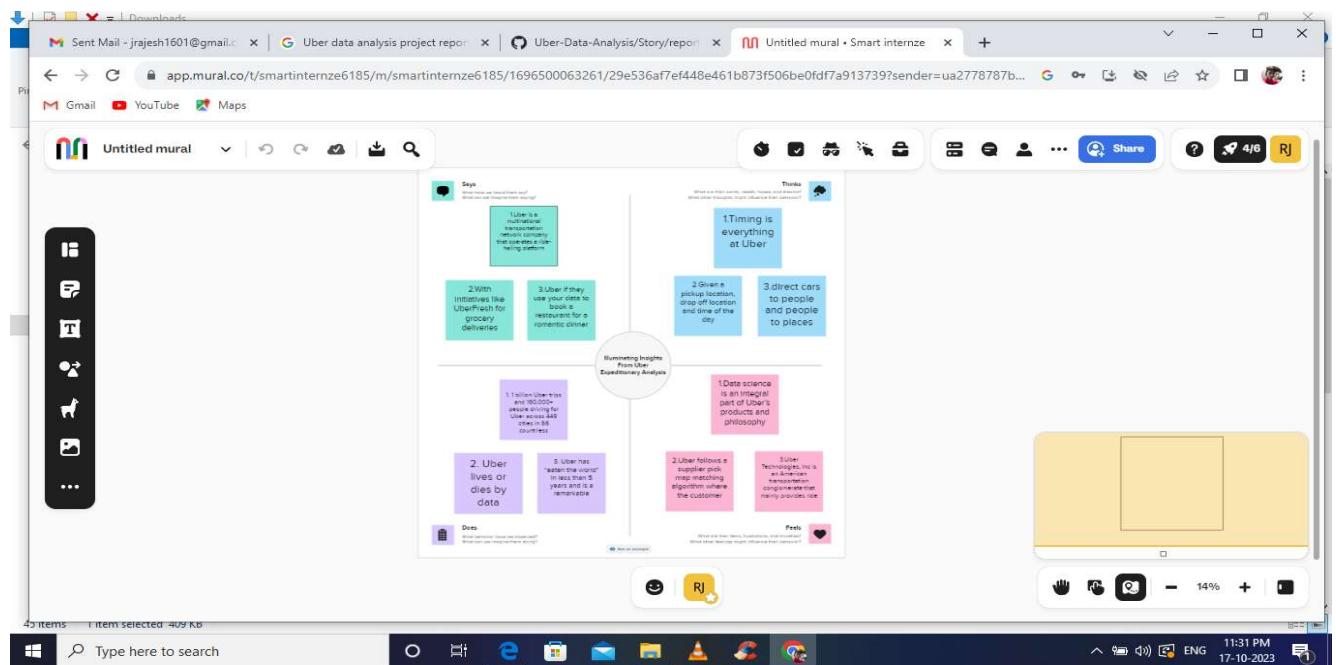
as a reduction in agent resolution time by just a few seconds, can contribute to significant cost savings. These also ensure a better support experience for our users.

3. Improve Product Experience

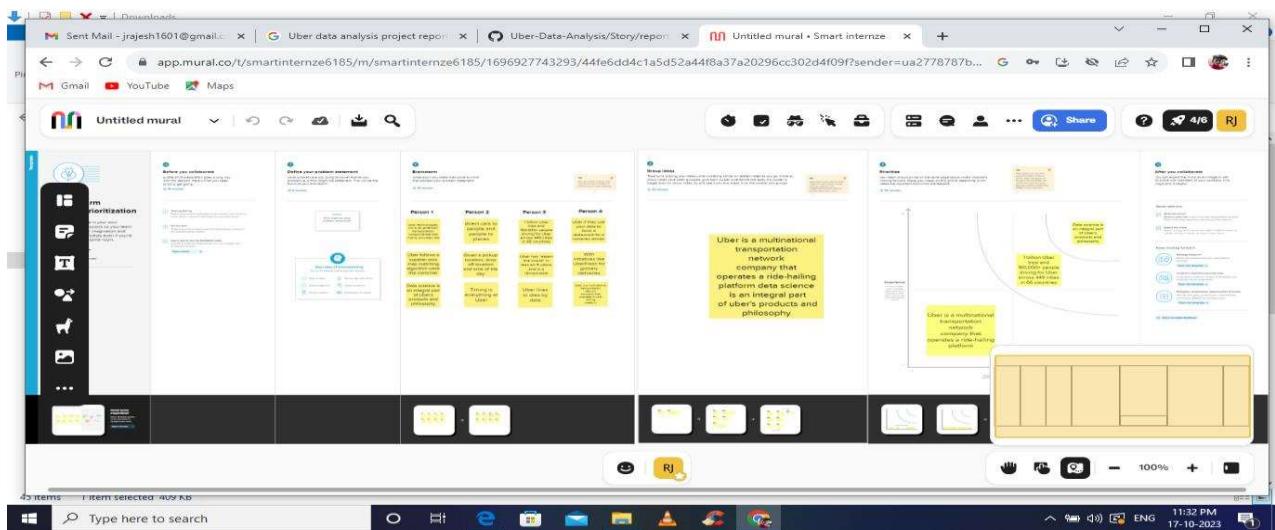
Post resolution, support issues also help us understand the root cause defects in our products. The actual defect could be in the form of an app issue, a back-end service issue, a user onboarding issue, or even an issue with partners such as restaurants. The customer feedback collected through support also helps us understand how a product feature is used and if the user experience needs to be improved. Given the broad applicability of support data described above, we have invested heavily in building tech that transforms our raw support data into valuable insights for Uber.

2. Problem Definition and Thinking

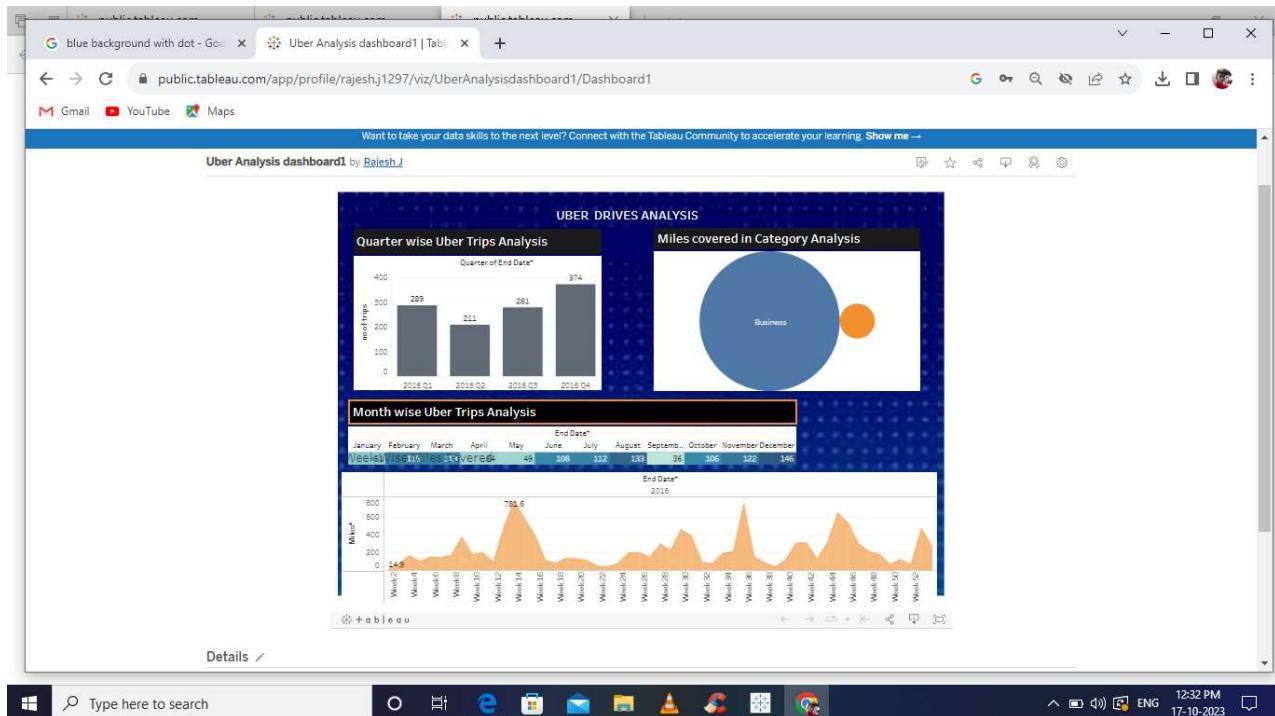
2.1. Empathy map

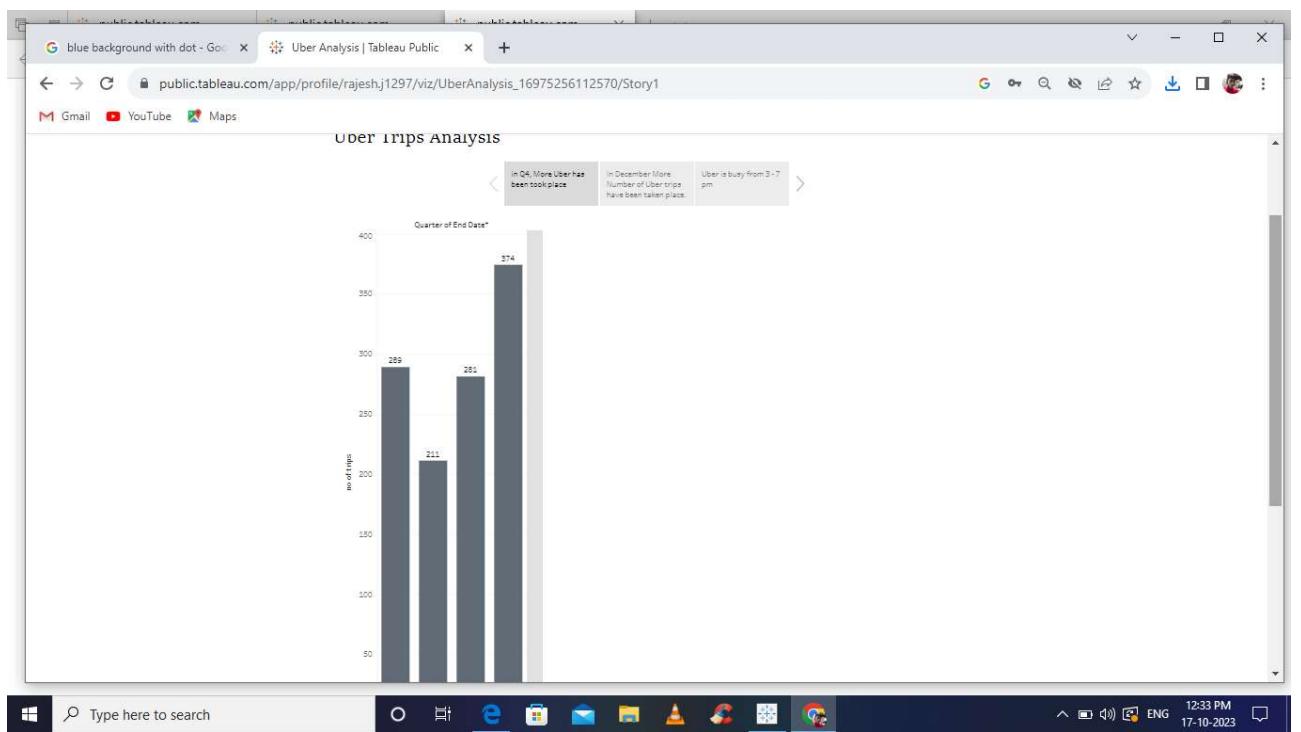
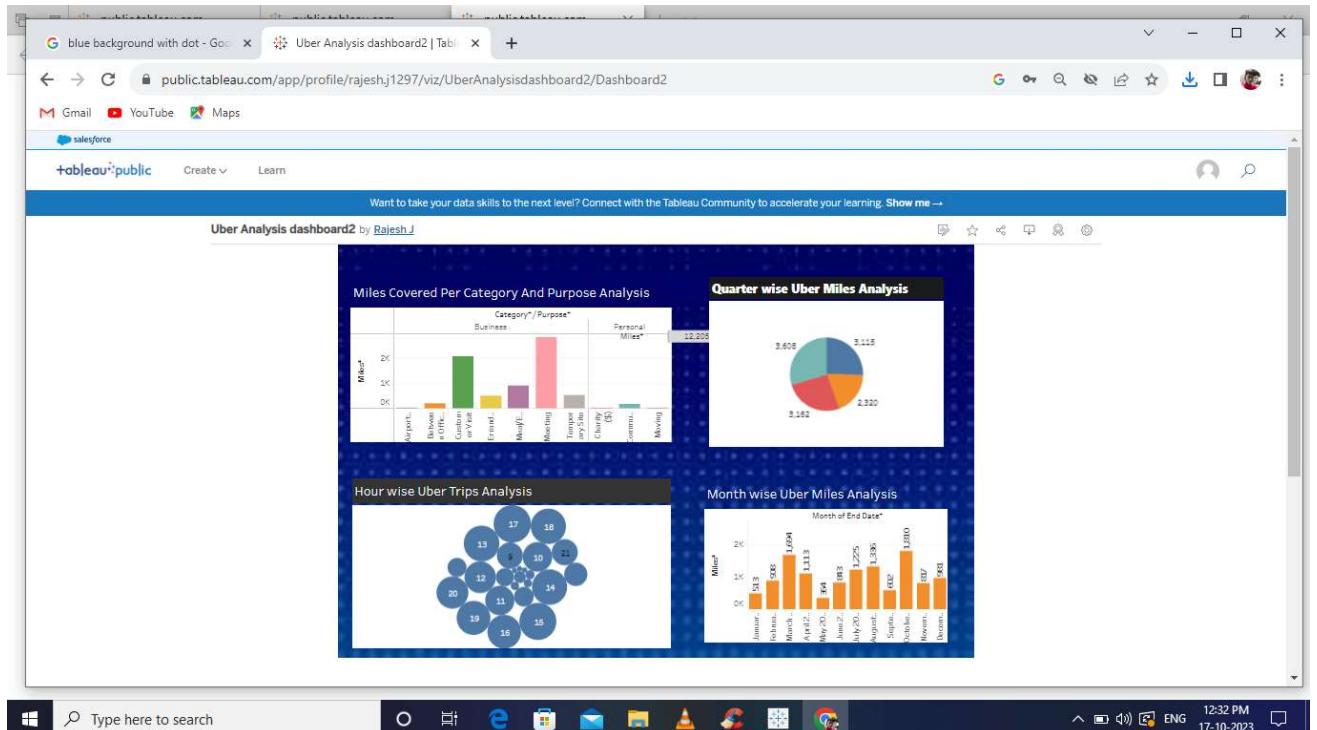


2.2.Ideation and Brainstorming Map



3.Result





4. Advantages and Disadvantages

4.1. Advantages of Uber

Uber through E-hail has hired drivers easily and fast. Proprietary software in the app locates drivers circling nearby cheapest carpooling luxury wheels. The price is fixed.

Convenient and Cashless

Instead of chasing a taxi on a street, or calling and waiting, app users can book a ride from any location and it arrives in minutes. Passenger's credit or debit card is linked to the taxi app account, no cash changes hands. After the completion of the ride, A receipt is sent via email, and some links to options for rating and tipping the driver.

Professional Service

Drivers for Uber may use their own cars and bike. Drivers get incentives to keep their taxis clean and well-maintained. The cheapest options for taxis are late-model compact cars and bikes. The riders need to insert their destinations into the app, and the drivers use the taxi app navigational features to reach the rider which is provided by the taxi app development company. The driver talks in a polite and well-spoken manner. Drivers don't get your destination details before picking you up. A driver with a low rating will force a driver out of Uber or its competitors.

Competitive Pricing

Uber is less expensive than other taxi services, but not always. Longer trips are always cheaper by Uber but short rides can be expensive. The price model for Uber and other taxi apps can have higher booking prices due to busy times of the day. It is impossible to come up with a fixed price for an uber ride. Its costing plans vary from one city to another and from one country to another. But uber always show you the estimated fare before starting the ride.

Safer and Flexible

Safety is crucial for both passengers and drivers. This is what Uber is good at it. It is one of the major advantages of Uber. The riders are registered their identities and their payment channels. Cashless transactions also make it safer a driver and rider don't need to carry cash.

4.2. Disadvantages of Uber

Drivers are not assured of minimum pay to maintain their own vehicles. This topic is growing controversial in many cities because New York City mandated a \$17.22 minimum wage for drivers.

Surge Pricing

“Surge pricing” or “rush time pricing” is not fixed in Uber. It’s a free market principle of raising prices according to supply and demand. This means how many taxis are available (supply) and how many customers want to ride(demand). This automated system sometimes shows differences in pricing between any two same points. At peak times, the price could be double or more. This means too costly during rush hour. Although this benefits Uber by increasing the supply of drivers. Drivers can be motivated to earn at this time.

Low Fares Worry Drivers

Some Uber drivers say they struggle to earn minimum wage. Drivers have to pay the cost of fuel, maintenance, and repairs from their own pocket. With competition from other taxi apps, the earnings of drivers can be driven downward. This indicates that they need to work for longer hours to earn a certain income.

Price Competition

Uber and other taxi-hailing companies are engaged in an intensive fight to provide the most affordable service. They are competing with traditional taxi services for both customers and drivers. This has led to low earnings for taxi drivers.

5. Application

- Vehicle financing. Our partnerships with car agencies give help driver-partners start or grow their own business.
- Phone plans. When you drive with Uber, your phone is where you run your business.
- Car insurance. Every trip is insured with no extra cost to you.

1. Book a ride for now or later

This is the basic feature that all apps like Uber need to have. It enables users to book a ride for now for a future trip.

The ‘book a ride’ functionality consists of multiple features that combined deliver the required capabilities. Before the ride is booked, users need to provide the following input:

- ✓ the pick-up location

- ✓ the drop-off location
- ✓ the type of vehicle that users prefer
- ✓ the time and date (for the book for later feature)

2. Real-time tracking of drivers

Uber addressed one of the main problems of traditional taxis – the inability for users to fully understand when the driver will arrive at the pick-up location. The app allows users to track drivers in real-time with the help of GPS integration. Uber is a GPS-heavy application with many features depending on this technology. The feature is a life-saver for both users and drivers in situations when drivers can't find the needed locations. Users can guide them with text messages or on a call based on their location on the in-app map.

3. Real-time ride tracking sharing

Uber takes safety very seriously. As a part of efforts to provide users with safe rides, the company implemented a useful feature. It allows users to grant their friends or family the right to track their drivers in real-time. The main goal of the feature is to make users feel safer, especially when they are using Uber in an unfamiliar city or location. After users reach the destination, they can notify friends that they've arrived safely. This is a nice-to-have feature that you should consider for taxi app development.

4. Split the fare

When riding Uber with other riders, users can split the cost with other riders. Uber charges all credit cards equally plus a small transaction fee. The Split Fare improves customer experience as riders don't have to pay with cash.

5. Multiple drop-off locations

Another useful option when traveling with friends is the ability to choose multiple drop-off locations. When booking a ride, users can add multiple locations where the driver will need to make along the route. They can also change the route on the go and add or change drop-off locations. Along with such changes, the fare for the trip is also automatically changed.

6. Multiple payment options

The more payment options you provide, the better the user experience. Uber offers both online and offline payment options. Users can pay for a ride with cash, with their credit card, or even using a mobile wallet. This is one of the key Uber app features for a clone of Uber.

7. Preferred driver

Many riders use such apps as Uber on a regular basis to get to their offices and back home in the evening. After making a few rides, users usually start having preferences when it comes to drivers. This is one of the important features of the Uber app that you should include in ridesharing app development. During the ride-booking process, the app can ask passengers about their preferences. If the driver is free, the app will automatically assign the ride to them.

8. Driver review and rating

Reviews and rating functionality should be in the Uber app features list. Users, who've had a ride with a driver, should be able to rate their experience and rate the driver. his information will help other users to decide whether to book a rider with a driver or to choose another one. For admins of the app, such reviews indicate drivers who deliver the best experience and those who should improve the provided services.

9. Trip history

Features of the Uber app also include trip history. The access to such information allows riders to see how much they were charged for a ride, how many riders they've done over some period of time, what experience they had, and which destination they've traveled to.

10. Saved destinations

Humans are creatures of habits. They often visit the same destination. When booking a ride, users need to type in the name of the destination in the app. To streamline the process, Uber app features allow them to save destinations for faster rider booking

in the future. Users should also be able to add custom names for such places, for example, home, office, or gym.

11. In-app chat or call option

Messaging should be included in the Uber app feature list. In some situations, users might need to get in touch with drivers to help them find the pick-up location or to learn about their whereabouts. The in-app chat or call option will make it possible. Consider also adding a chat with the customer support team and setting up a chatbot to help users with the most frequently asked questions.

12. Sync meetings with Calendar Shortcuts

Users of Uber can sync their calendars with the app. This option allows all meetings with an address to appear in the Uber app as shortcuts. The key benefit of such a feature is a streamlined process of ride booking.

13. SOS panic button

This feature of Uber is a must-have if you want to make your riders feel safe. Users can use this functionality to notify friends and family about emergencies that occurred during a ride or get in touch with customer support in case of dangerous situations.

6. Conclusion

In conclusion, this project has shed light on the immense potential of data analytics in transforming the operations and decision-making processes within Uber. Through the analysis of vast datasets, we've been able to uncover valuable insights that can drive improvements in various aspects of the ride-sharing service. Our exploration of customer behavior, driver patterns, and market trends has provided a comprehensive view of the dynamic landscape in which Uber operates. The key takeaways from this project highlight the significance of data-driven decision-making for Uber's continued success. By harnessing the power of data analytics, Uber can optimize driver allocation, reduce rider wait times, enhance safety measures, and ultimately create a more efficient and enjoyable experience for its customers. Furthermore, we've demonstrated the potential for predictive analytics to

help Uber anticipate demand, allocate resources more effectively, and mitigate operational challenges. The integration of machine learning models and real-time data streams has the potential to revolutionize the way Uber operates, offering both cost savings and enhanced service quality. As we move forward, it's essential to acknowledge that the world of data analytics is continually evolving. Uber must remain agile and adapt to changing customer preferences, regulatory environments, and emerging technologies. This project serves as a foundation, and further research and implementation of data analytics can lead to even more impactful results. In conclusion, Uber's commitment to data-driven decision-making is not merely a technological choice but a strategic imperative in an increasingly competitive industry. The insights gained from this project should serve as a stepping stone for Uber to continue refining and enhancing its services, ultimately benefiting both riders and drivers.

7. Future Scope

1. Expanding Service Offerings:

Diversification of Services: Uber has been constantly evolving to include new modes of transportation, such as bikes, scooters, and public transit options. Our project could explore opportunities to integrate even more transportation alternatives or services to cater to diverse customer needs.

2. Enhanced User Experience:

Personalization: Implementing advanced data analytics and machine learning algorithms to provide highly personalized experiences to users, including route suggestions, promotions, and content recommendations. User-Friendly Interfaces: Continuously improving the user interfaces and mobile applications to make the booking process even more intuitive and efficient.

3. Sustainability Initiatives:

Promoting Greener Transportation: In line with global sustainability goals, Uber is showing a growing interest in reducing the environmental impact of transportation.

Our project could explore and implement strategies to further promote eco-friendly modes of transportation and reduce carbon emissions.

4. Safety and Security:

Advanced Safety Measures: Implementing cutting-edge safety technologies, including real-time risk assessment, emergency response features, and improved identity verification. Driver and Rider Safety: Continuously enhancing the safety of both drivers and passengers through innovative solutions.

5. Global Expansion:

Market Penetration: Exploring new markets and regions where Uber's services can be introduced, thus increasing its global footprint. Local Adaptations: Tailoring services to meet the specific needs and preferences of customers in different countries and cultures.

6. Regulatory Compliance:

Staying Compliant: As regulations surrounding ride-sharing services continue to evolve, ensuring that Uber remains compliant in various jurisdictions will be vital.

7. Technology Upgrades:

Cutting-Edge Technology: Staying at the forefront of technological advancements in areas such as autonomous vehicles, AI, and blockchain for secure transactions and data management.

8. Community Engagement:

Social Responsibility: Further engaging with local communities, addressing their concerns, and contributing to their betterment through initiatives, partnerships, and orations.

9. Research and Development:

Collab Continuous Innovation: Investing in R&D to develop new features and services that can revolutionize the ride-sharing industry. This future scope outlines the directions and possibilities for Uber to continue evolving and improving its services. As technology and consumer preferences evolve, there will be ample

opportunities for Uber to remain at the forefront of the transportation industry by embracing innovation and adapting to the changing landscape.

Thank you