# **Task 1: Ride Scheduling Feature analysis**

**Recommendation:** We should implement this feature on Bolt

## Feature summary

*Notes: Frame the problem, solution and outcomes at high-level for discussion*

**The problem:** Currently, 10% of our rides are ideal candidates for ride scheduling, which would offer a significantly better experience than on-demand hailing. These are predictable, repeat trips that we’ve identified in our metrics, representing valuable revenue streams that competitors are aggressively targeting.

**The Solution:** The solution is a ride scheduling feature that enables riders to set a pickup time, location, and drop-off point at least two hours in advance. This feature caters to time-sensitive trips, such as early morning commutes or airport transfers, where on-demand availability may be limited. By offering greater reliability and convenience, especially during off-peak hours, it ensures riders have a seamless experience without the uncertainty of last-minute bookings.

**Outcomes:**

* **Rider:** Improve the Bolt rider’s experience for critical off-peak commutes
* **Driver:** Timely assignment to requests that optimize their earning per trip

## Feature Analysis

*Notes: Breakdown data we have to build a business case. Backup the customer ask, conduct competitor analysis, review business outcomes, establish ways to measure success. Include further research through interviews, surveys, etc to strengthen any cases that are not clear.*

### Rider needs analysis

This feature ranks as the third most requested based on our feature request logs and online engagement data. Riders are eager for it because they want:

* An easy way to schedule and manage pre-planned trips with 3 key use cases identified
* Assurance of a reliable, on-time pickup, avoiding issues like cancellations and unpredictable pricing
* The guarantee of securing the right type of vehicle for their specific needs

However, some potential drawbacks to consider include:

* Reduced scheduling flexibility due to the need for early commitment
* Higher rates charged for the convenience and priority of the request

Key outcomes of a successful feature will be pegged on adoption of the new feature starting with the 10% of identified trips, growth in adoption and revenue generation, and CSAT.

### Driver need analysis

While this feature is highly requested by riders, there are important outcomes to consider for drivers:

* Drivers want trips that maximize their earnings.
* They need assurance that cancellations won’t significantly impact their income.
* They prefer timely trip assignments to help plan their day effectively.

However, some potential drawbacks for drivers include:

* Reduced flexibility due to the commitment to be at a specific pickup location at a set time.
* The possibility of cancellations, even with early planning.

Key outcomes for a successful driver experience will be low cancellation rates, and improved satisfaction relative to on-demand rides.

### Business analysis

Based on our analysis of repeat-trip data, we estimate that 10% of daily trips can be scheduled in advance. This includes three key use cases:

* Airport drop-offs from frequent travelers (6%)
* School zone pickups and drop-offs during the school season (2.5%)
* Office commutes, where 30% of users have corporate Bolt accounts (1.5%).

These segments represent $200 million in repeat annual revenue, with an expected monthly growth rate of 12%. Competitors like Uber and Lyft already offer ride scheduling, and by introducing this feature, we can reduce revenue loss from loyal customers booking trips on other platforms and attract new users who view this as a necessity.

Lastly, we see significant growth potential, airport transfers are projected to reach $11 billion in 2024 and grow by 20% by 2034, while the school shuttle market, currently at $10 billion, is expected to grow 15% over the same period. This presents a major opportunity for revenue and dominance in new markets.

## Proposed solution

*Notes: Define user journey, provide high-level view of the feature, provide high level costing in collaboration with engineering and design.*

| Feature | Description | Comments |
| --- | --- | --- |
| Schedule a ride | On the landing screen, add a CTA to schedule a ride | We should be able to rollout gradually by geo and customer metrics |
| Select pickup and drop off locations | Select a location similar to current experience | Drop off time is vital to ensure they plan appropriately |
| Select a pick-up date and time | Select a date not more than a month away, and a time not less than 2 hours away. | We need to show drop off time to ensure they are planning adequately. Allow for edits |
| Show final price | Show the final price with a 15% from normal estimates | This is a premium feature and we should be clear there is a slightly higher difference in price |
| Match with a driver | Find a driver 30-minutes to time and monitor their progress. | We should explore other algorithms like blocking off drivers immediately. |
| Monitor driver progress for pickup | Monitoring needs to be strict so a reassignment can happen if need be. | Riders might not be monitoring to notice issues such as unresponsive drivers.We need to monitor keenly and intervene if there is no progress. |
| Rider cancellation | The rider should be able to cancel the ride with varying charges depending on proximity to scheduled time |  |

### Engineering estimates

**Matching feature: (t-shirt size: XL)**

* We might need to implement a different matching algorithm given how early in the request a match is made and how pricing is calculated since variable factors are different from request to actioning.

**Driver monitoring and remediation feature: (t-shirt size: L)**

* We need to reduce risk of missed pickups especially where the rider is not actively monitoring the request.

### constraints

* We need to establish which algorithm will provide the best outcome. Lyft uses the path of blocking a driver’s calendar on request which has yielded a lot more CSAT compared to Uber who are doing a match x-hours to pickup.
* Rider cancellations have a high impact on the driver if not compensated: We need to support cancellations to allow for changes in schedule. This, however, need to be compensated especially once the driver is actively acting on the request.
* The cancellation policy has potential for abuse given the refund strategy employed. Bolt should not be paying any percentage of the refund and this should come directly from the rider based on the policy created.

### How we measure success

* **Rider Adoption:** Convert 50% of recurring trips in key scenarios (airport transfers, school zones, corporate commutes) to scheduled rides by the end of 2025.
* **Rider Satisfaction:** Achieve an average rider rating of 4.5 out of 5 for scheduled rides.
* **Driver Satisfaction (Cancellation Rates):** Keep rider cancellation rates for scheduled rides below 10%.
* **Driver Satisfaction (Earnings):** Increase driver earnings for scheduled rides by 15% compared to on-demand rides.
* **Revenue Impact:** Generate $60 million in ride scheduling revenue by the end of 2025.

### Verdict: Proceed with Implementation

Given the potential benefits for both riders and drivers, and the competitive advantage it could provide, I recommend proceeding with the implementation of the ride scheduling feature. From this we maintain our competitiveness in the industry, strengthen offering for key scenarios identified, open up opportunities for new revenue, improve rider and driver satisfaction. The risks identified can be mitigated through policy and technology to allow us pilot the experience.

* it should be rolled out in phases, starting with a pilot program in select cities to gather data and refine the feature.

# **Task 2: Data Analysis**

Analysis

1. Test how location, date/time of request, average distance,

*and translate your insights into* ***actionable solutions****.*

Variables in the file:

| **Variable** | **Meaning** |
| --- | --- |
| order\_id\_new order\_try\_id\_new | Id of an order |
| calc\_created | Time when the order was created |
| metered\_price distance duration | Actual price, distance and duration of a ride |
| upfront\_price | Price promised to the rider, based on predicted duration (predicted\_duration) and distance (predicted\_distance) |
| distance | Ride distance |
| duration | Ride duration |
| gps\_confidence | Indicator for GPS quality   * 1: good * 0: bad |
| entered\_by | Who entered the address |
| b\_state | State of a ride   * “finished”: ride was actually done |
| dest\_change\_number | Number of destination changes by a rider and a driver.  Includes the original input of the destination by a rider.   * Minimum value: 1 |
| predicted\_distance | Predicted distance of a ride based on the pickup and dropoff points entered by the rider requesting a car |
| predicted\_duration | Predicted duration of a ride based on the pickup and dropoff points entered by the rider requesting a car |
| prediction\_price\_type | Internal variable for the type of prediction:   * upfront, prediction: prediction happened before the ride * upfront\_destination\_changed: prediction happened after rider changed destination during the ride |
| change\_reason\_pricing | Records whose action changed the price |
| ticket\_id\_new | Id for customer support ticket |
| device\_token, device\_token\_new | Id for a device\_token.   * Empty for all the fields. |
| rider\_app\_version | App version of rider phone |
| driver\_app\_version | App version of driver phone |
| driver\_device\_uid\_new | Id of a phone |
| device\_name | The name of the phone model |
| eu\_indicator | Indicator whether a ride happens in EU |
| overpaid\_ride\_ticket | Indicator for a rider complaining about the overpaid ride |
| fraud\_score | Fraud score of a rider. The higher it is the more likely the rider will cheat. |