

Fleet

Maksim Sharoika, Simran Brar, Muhammad Zaman



00.

Table Of Contents

- 01. Our Team**
- 02. Project Introduction**
- 03. Why Choose Us?**
- 04. Business Need**
- 05. What's the Solution?**
- 06. Demo**
- 07. Development Processes**
- 08. Tech Stack**
- 09. Testing**
- 10. Future Implementations**
- 11. Conclusion**

01. Our Team



A

01.

Our Team

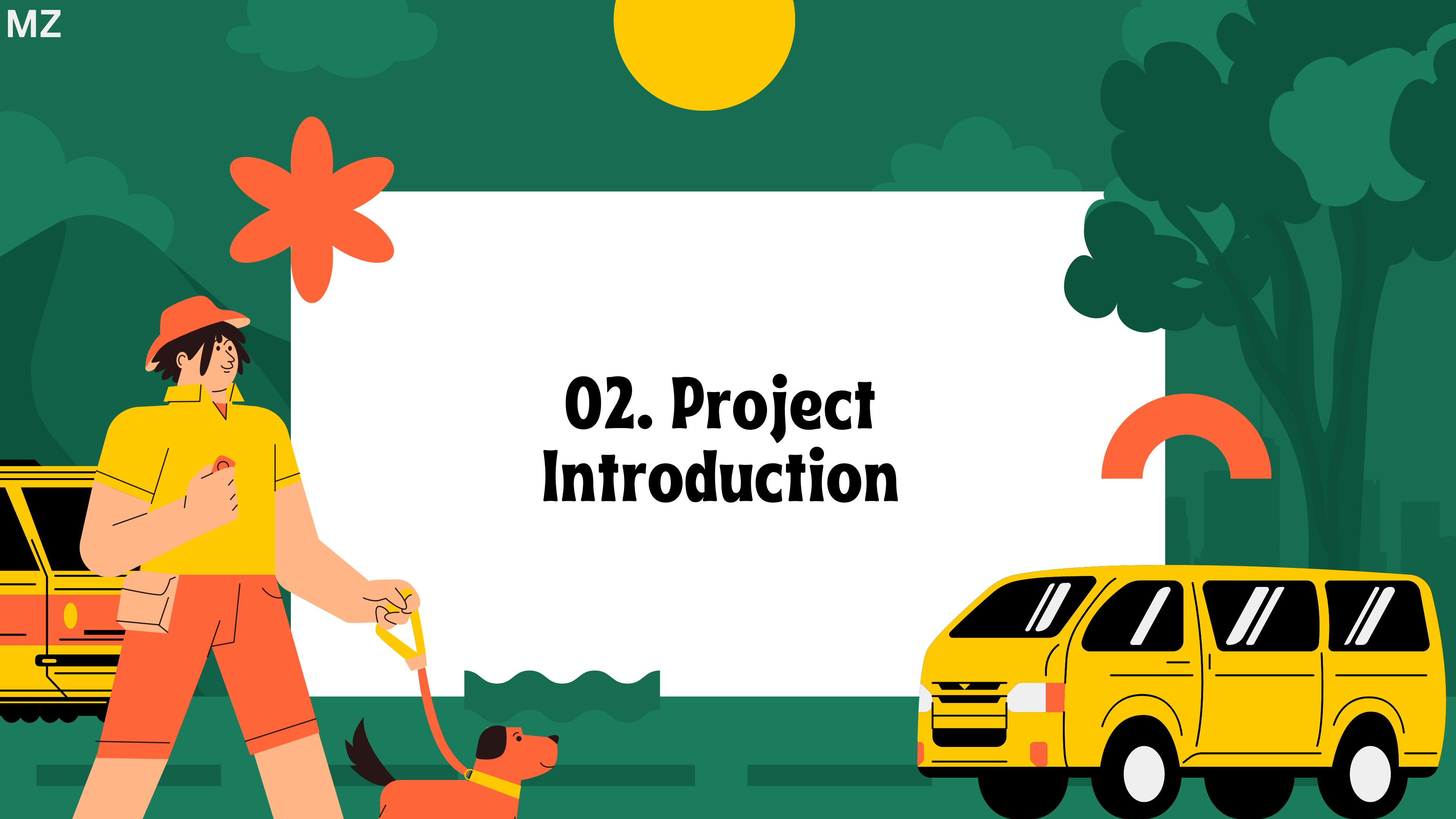


Muhammad Zaman

Maksim Sharoika

Simran Brar

02. Project Introduction



02.

**IN ORDER TO BE CONSIDERED A
CONTRACTOR, YOU MUST BE ABLE TO
SET YOUR OWN RATES.**

COOL, WHY IS THIS AN ISSUE?





02.

**IN THE CURRENT MARKET, RIDESHARE DRIVERS
RARELY HAVE THE ABILITY TO SET THEIR OWN
RATES DUE TO INDUSTRY MONOPOLIES, AND
DIFFERENT DRIVERS GET DIFFERNT RATES!**

THIS IS ILLEGAL IN MANY JURISDICTIONS!



02.

THIS IS WHERE WE COME IN!

INTRODUCING FLEET!

THE DRIVER DRIVEN ECONOMY FOR RIDESHARING
WHICH ALLOWS THE DRIVER TO SET THEIR OWN
RATES, AND OFFERS TRANSPARENCY OF FEES TO
RIDERS!

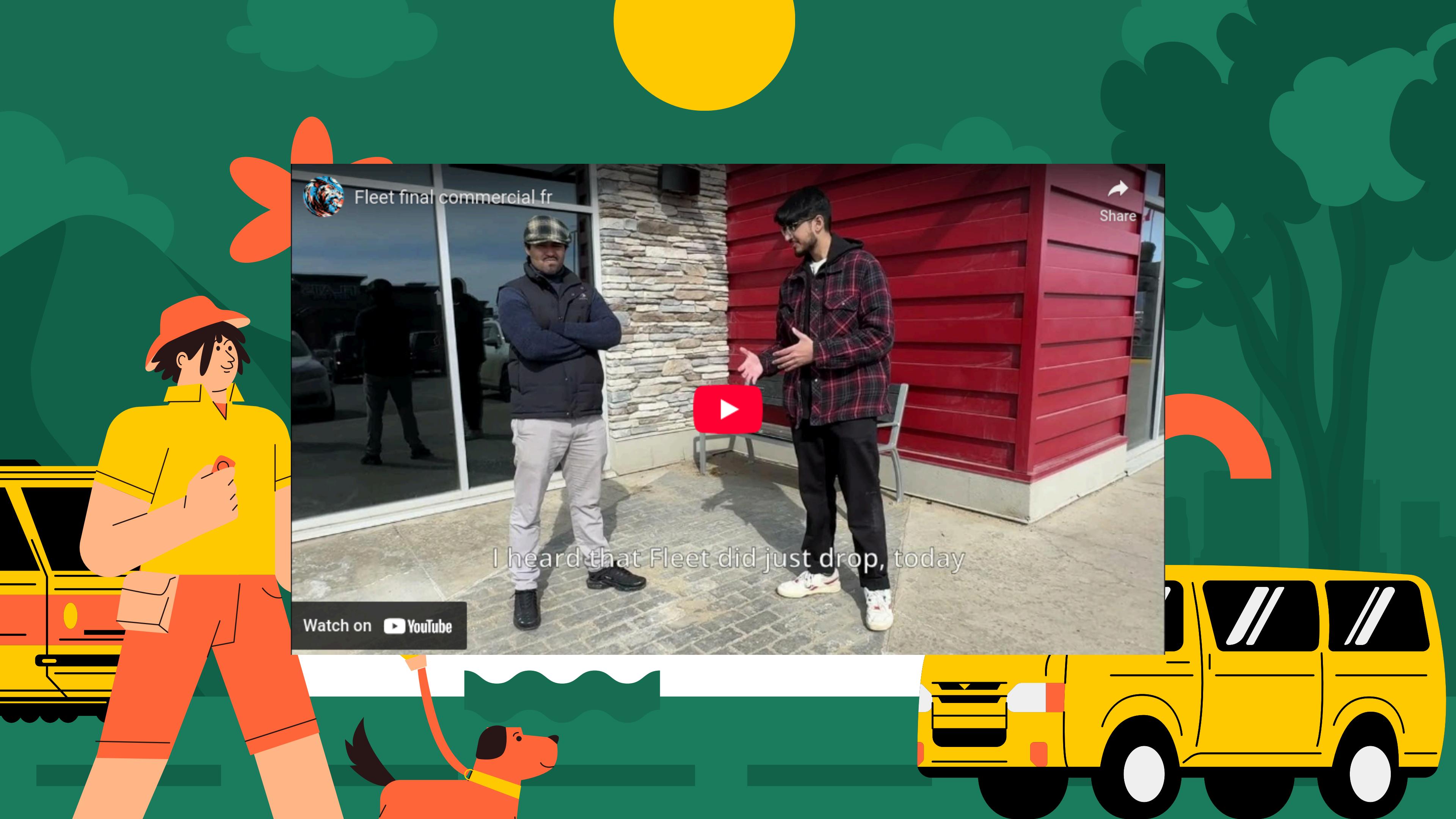




02.

DRIVERS GET TO KNOW EXACTLY WHAT THEY ARE GETTING, AND WONT BE TAKEN ADVANTAGE OF BY A BIG COMPANIE'S ALGORITHM. WHILE THE RIDER KNOWS THEY ARE SUPPORTING AN ETHICAL SOLUTION





Watch on YouTube

Share

I heard that Fleet did just drop, today

03. Business Need



03.

DID YOU KNOW, ON AVERAGE, A DRIVER
RECIEVES ~59% OF THEIR FARE THAT THE RIDER
PAYS?

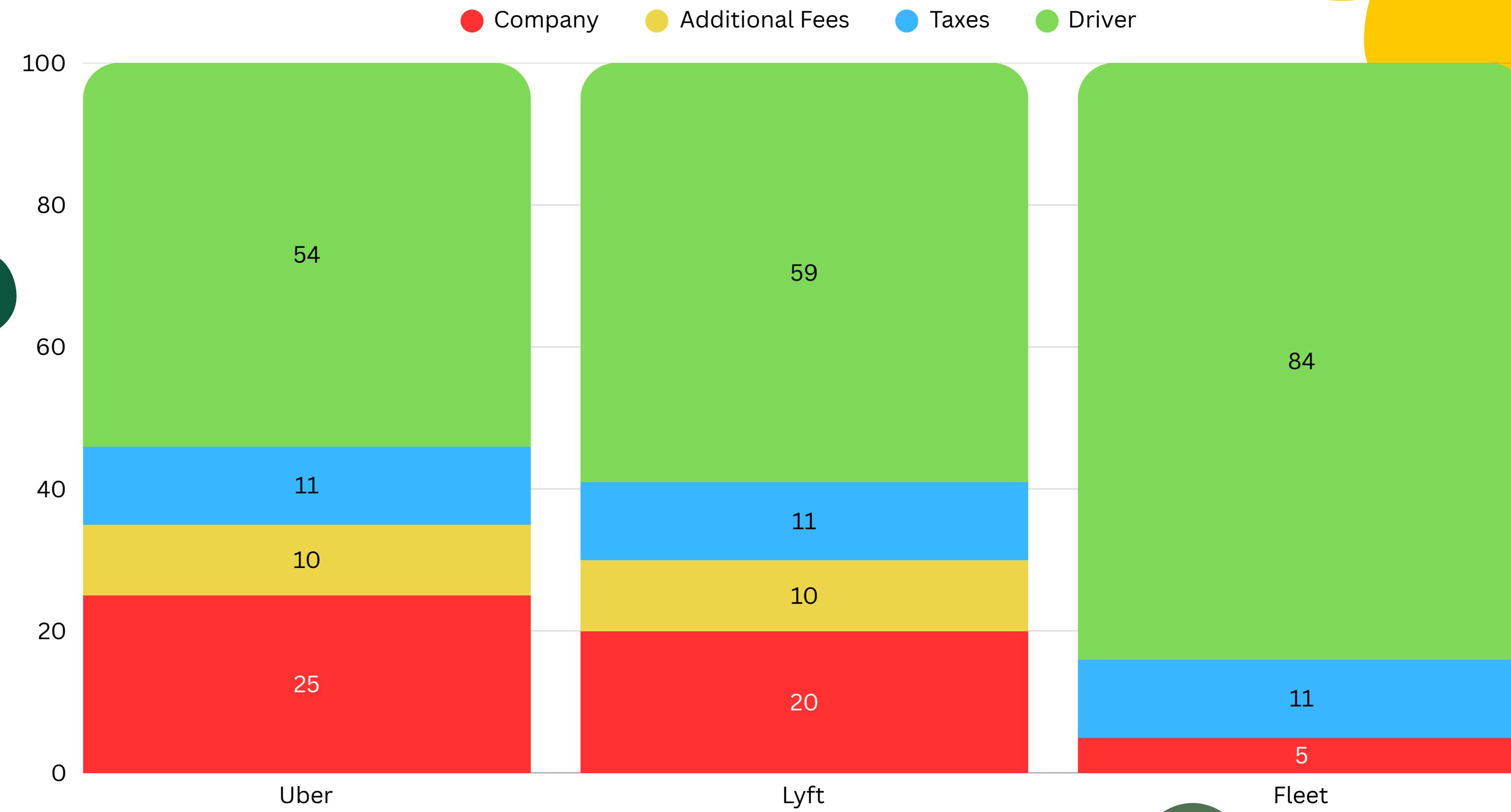
LETS PUT THIS INTO PERSPECTIVE.



MS

A RIDE'S FINAL COST BROKEN DOWN BY %

03.



03.

CURRENT COMPETITION

Currently there is **no major ride sharing platform that puts the Driver first**, letting them act as a true contractor while providing full transparency to all users.





04. What's the Solution?

04.

SOLUTION

Our solution focuses on **driver-led pricing, transparency, reliability, and simplicity.**

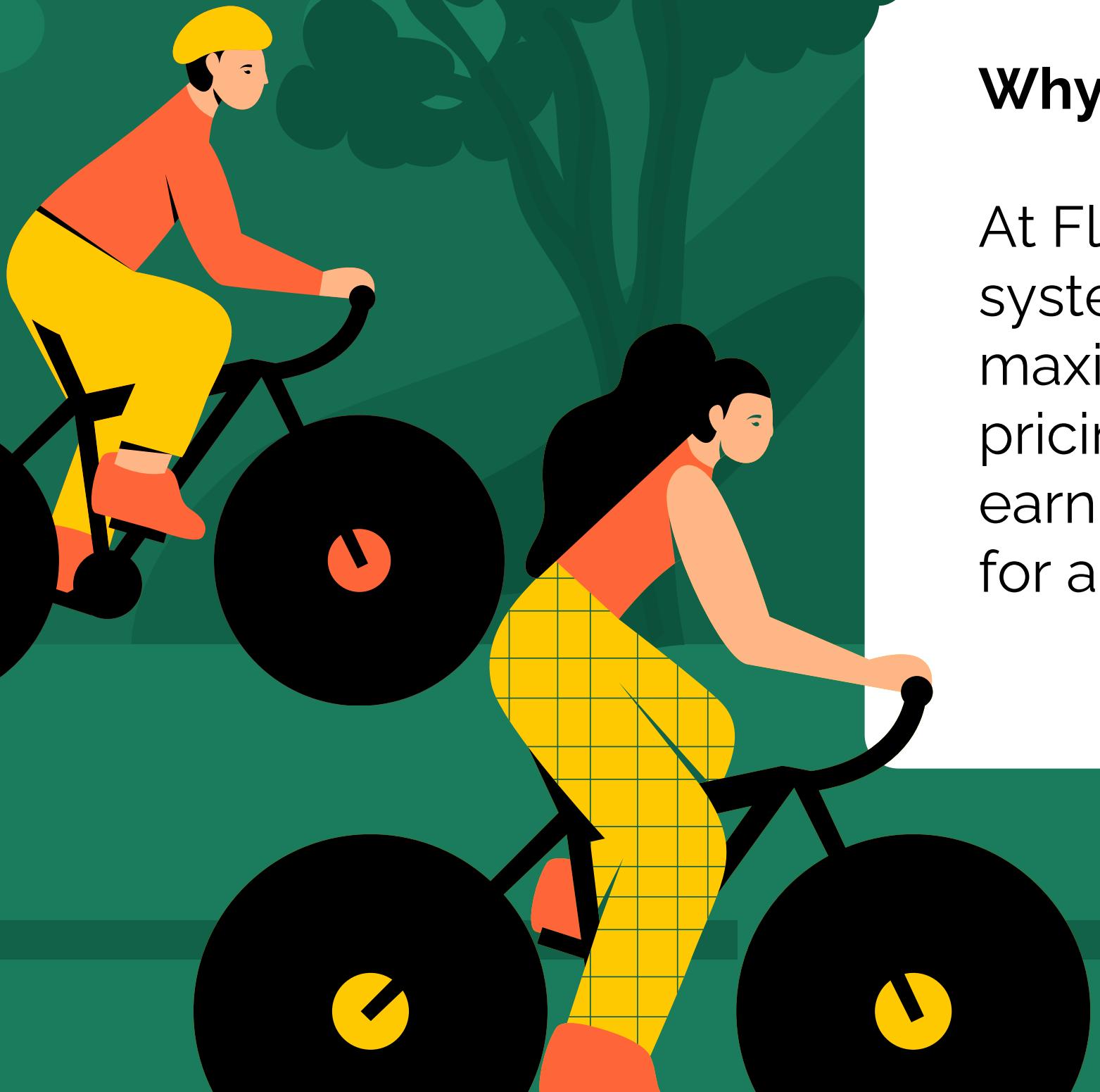
No matter the situation, Drivers have the freedom to set a fair rate for their service, while Riders can trust that the majority of the fare goes directly to the Driver.

05. Why Choose Us?





05.



Why Drivers will drive with us?

At Fleet, drivers set their own rates in a free-market system, unlike AI-driven pricing algorithms that maximize costs and minimize payouts. We offer full pricing transparency, with a complete breakdown of earnings. Plus, we don't track driver or rider behavior for algorithm training, and we don't use surge pricing.





05.



Why will Riders ride with us?

Riders pay a fair, transparent fare, knowing that drivers receive a larger share of the payment. And with Fleet taking a lower cut the Drivers can provide competitive prices to the monopolies.



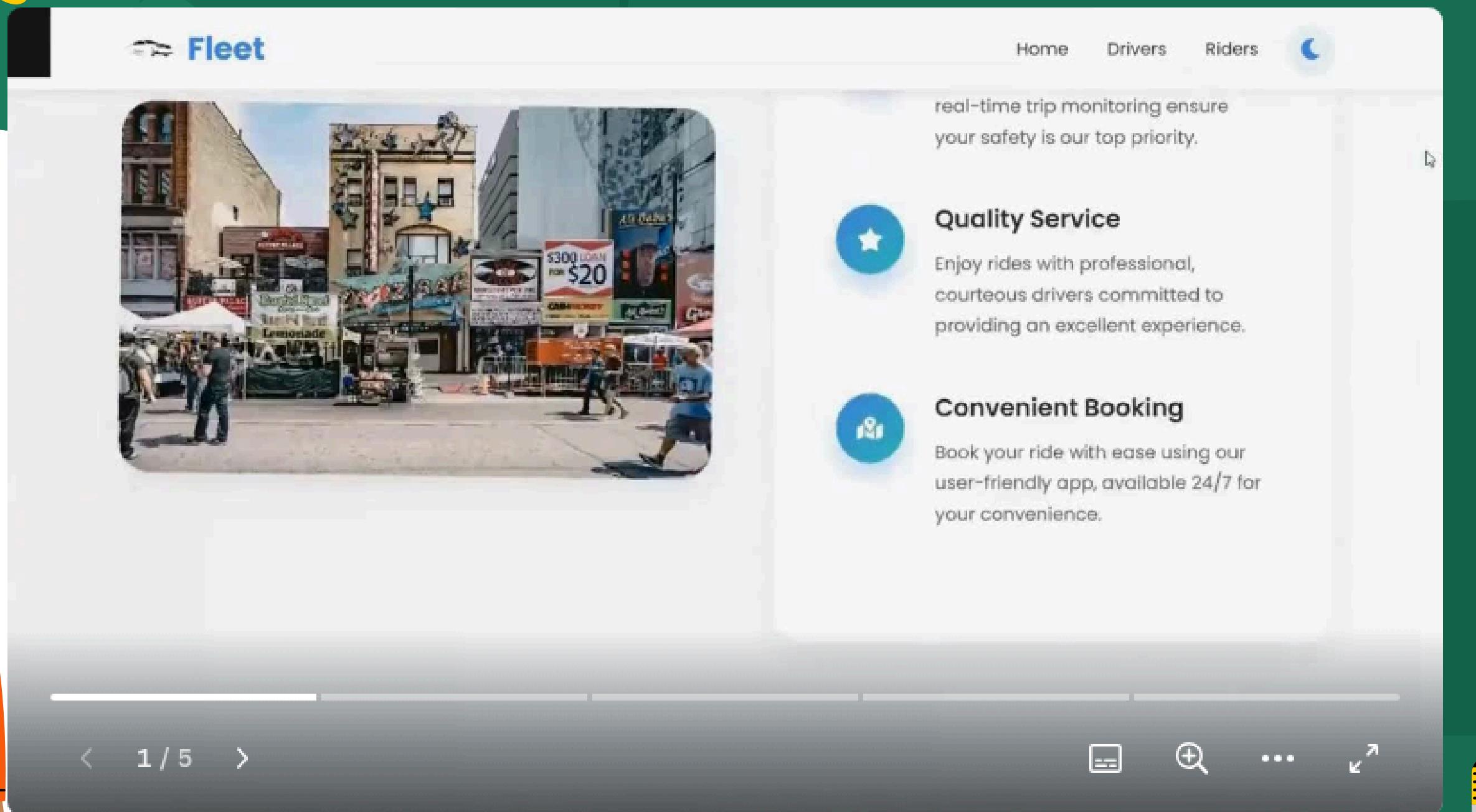
SB

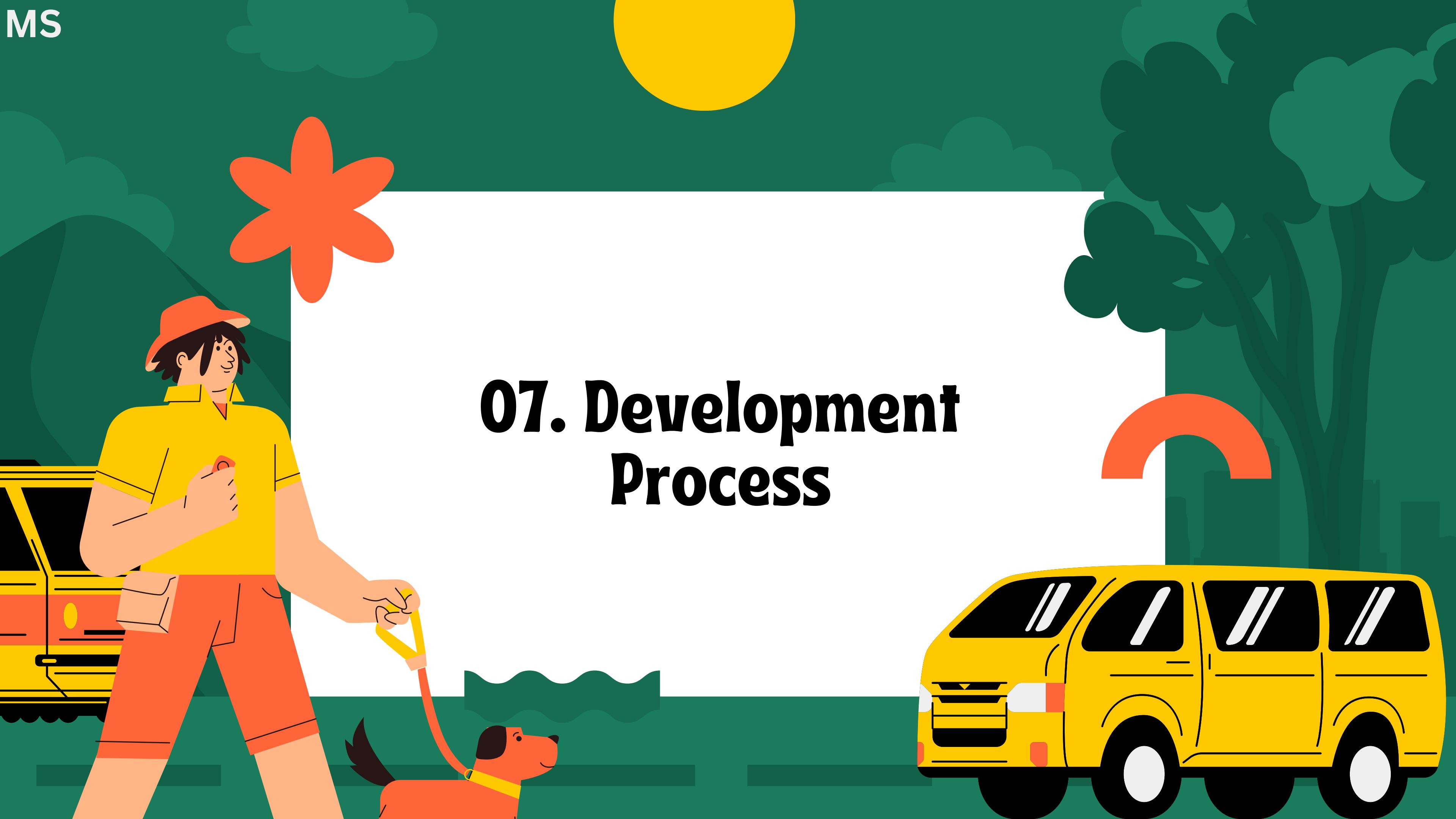


06. Demo



06.





07. Development Process

07.

USER INTERFACE

We now knew our problem, but the competition is steep. Thus, we need to offer the same user experience **we started with simple paper mockups**, sitting together and discussing our flows; then we used **Figma to create more indepth designs**.



07.

THE FLOWS

Rider Flow

1. Rider sign ups via the Application.
2. Rider will link thier payment method to thier account.
3. Rider will put in ride details, and look at the Drivers' offered total prices; and select one.

Driver Flow

1. Driver sign ups via the Application, and submits insurance, license, and registration documents.
2. An "Admin" will manually review and approve the Driver.
3. The Driver sets thier rates and going "Online".

Combined

1. A Driver will accepts a Rider's ride request.
2. Upon pickup, the Rider will confirm pickup.
3. Upon final location the Ride will end and the Rider will be billed.

07.

DRIVER SIDE (FIGMA)

Driver Sign Up

First Name
Helper

Last Name
Helper

Email
Helper

Phone
Helper

Password
Helper

Confirm Password
Helper

[Next](#)

Upload Documents

Drivers License
Helper

Drivers Abstract
Helper

Criminal Record Check
Helper

[Back](#) [Next](#)

Vehicle Details

Vehicle make
Helper

Vehicle Model
Helper

VIN
Helper

Vehicle Registration
Helper

Optional Additional Insurance
Helper

Vehicle Safety Inspection
Helper

[Back](#) [Next](#)

Application Summary

First Name: Driver
Last Name: Test
Email: example@example.com
Phone: 306-890-3434
Drivers License: licence.pdf
Drivers Abstract: abstract.pdf
Criminal Record Check: record.pdf
Vehicle make: Nissan
Vehicle Model: Sentra
VIN: 2SJD177WBDGWHW8822
Vehicle Safety Inspection: inspection.pdf
Vehicle Registration: reg.pdf
Optional Additional Insurance: ins.pdf

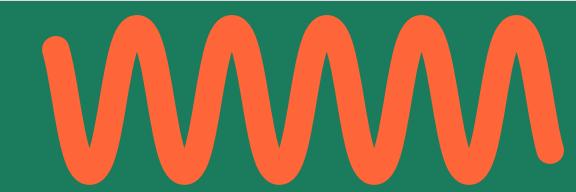
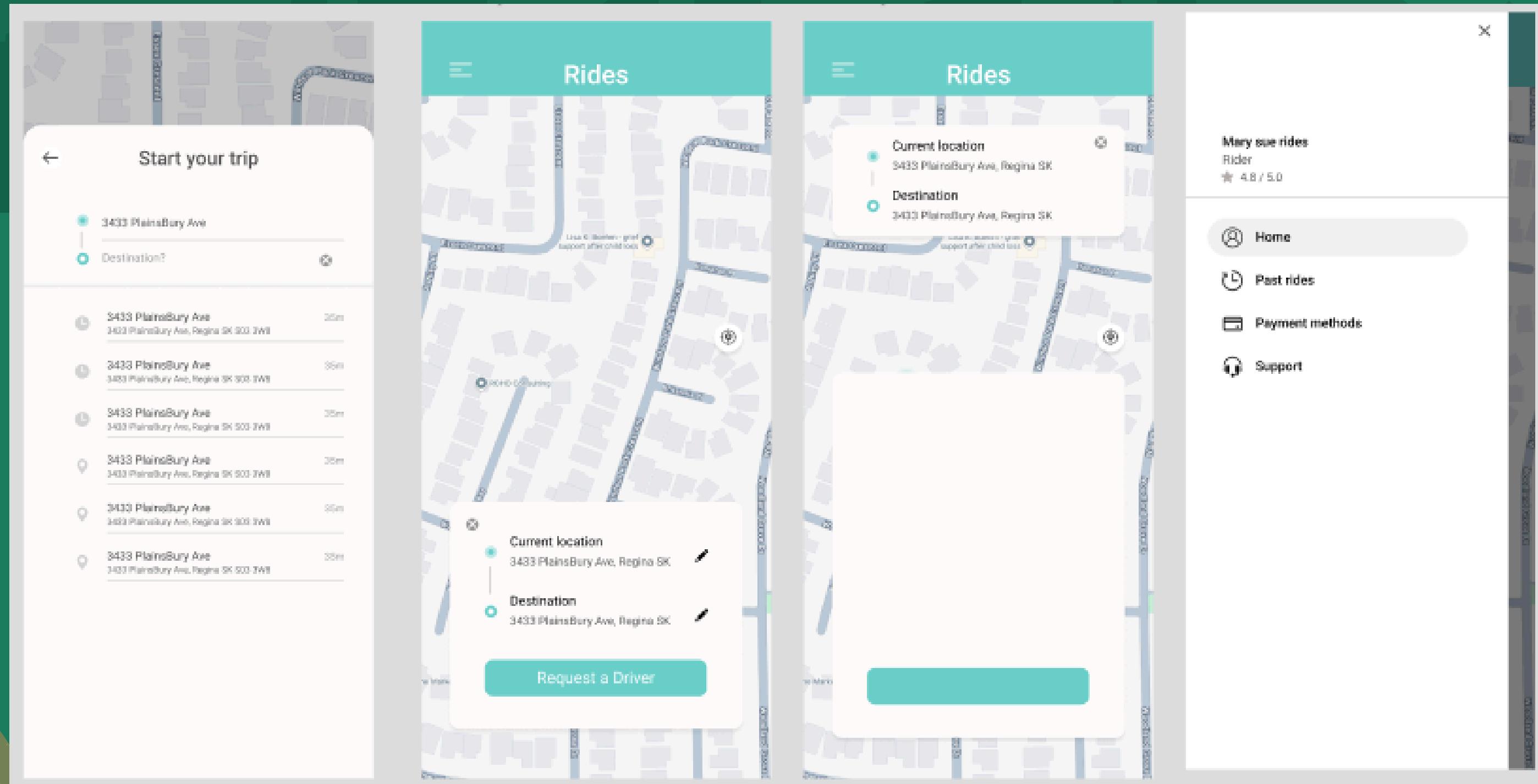
[Back](#) [Submit](#)

Thank you for Submitting your application! Check back in a bit to see any updates!

[Get Support](#)

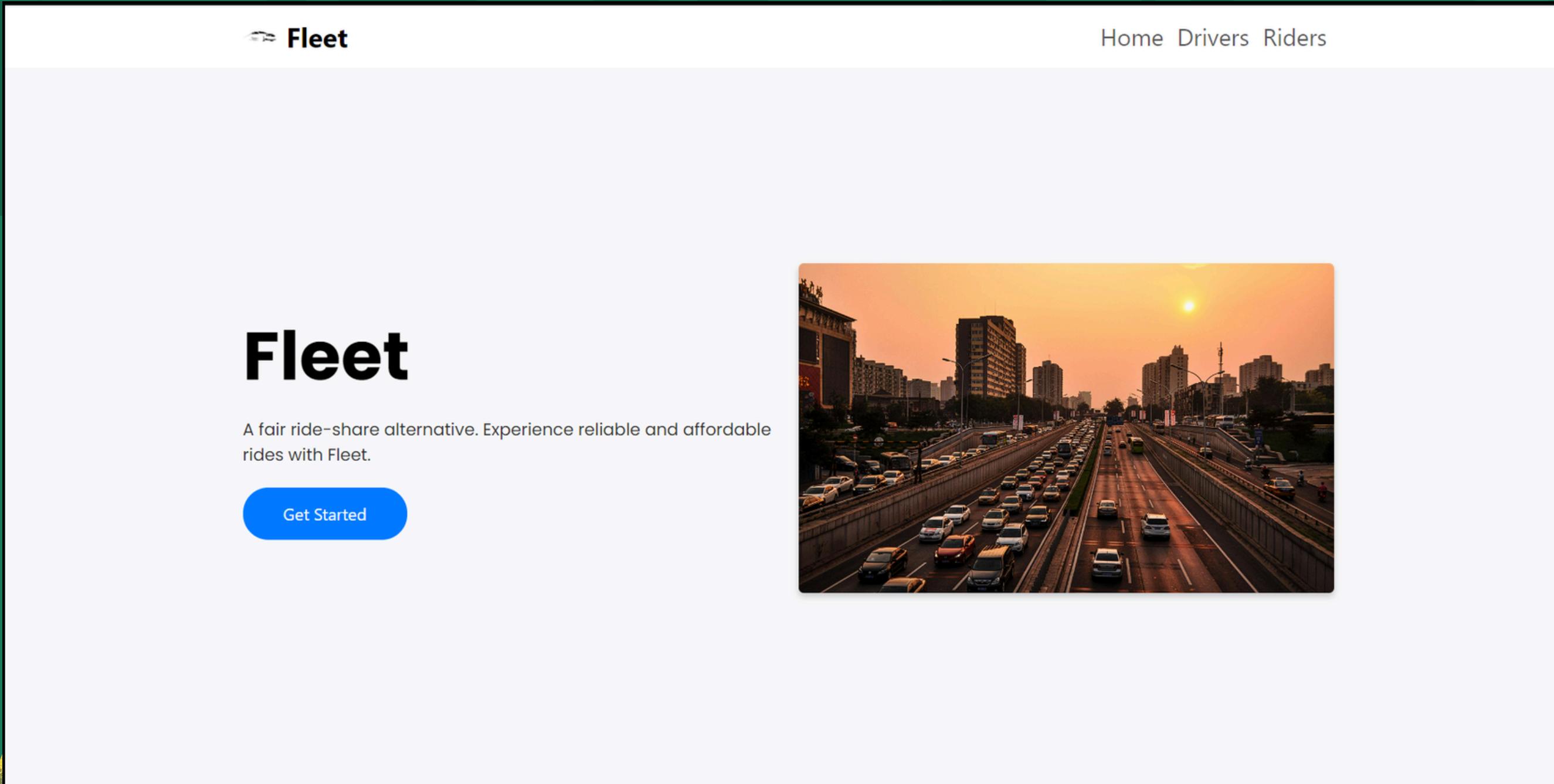
07.

RIDER SIDE (FIGMA)



07.

WEBSITE (FIGMA)



The screenshot shows the homepage of a website named "Fleet". The header features a logo with a car icon and the word "Fleet" next to it. To the right of the logo are three navigation links: "Home", "Drivers", and "Riders". The main title "Fleet" is displayed prominently in a large, bold, black font. Below the title is a subtitle: "A fair ride-share alternative. Experience reliable and affordable rides with Fleet." A blue button labeled "Get Started" is located below the subtitle. To the right of the text is a photograph of a busy highway at sunset, showing multiple lanes of traffic and buildings in the background. The overall design is clean and modern.

07.



FIRST ROUND OF FEEDBACK

Our initial feedback came from colleagues in our graduating class; **focusing on high-level design and UI adjustments**. This was supported with bi-weekly meetings with our project supervisor, Dr. Sharma, **focusing on infrastructure and correct planning processes**.





07.

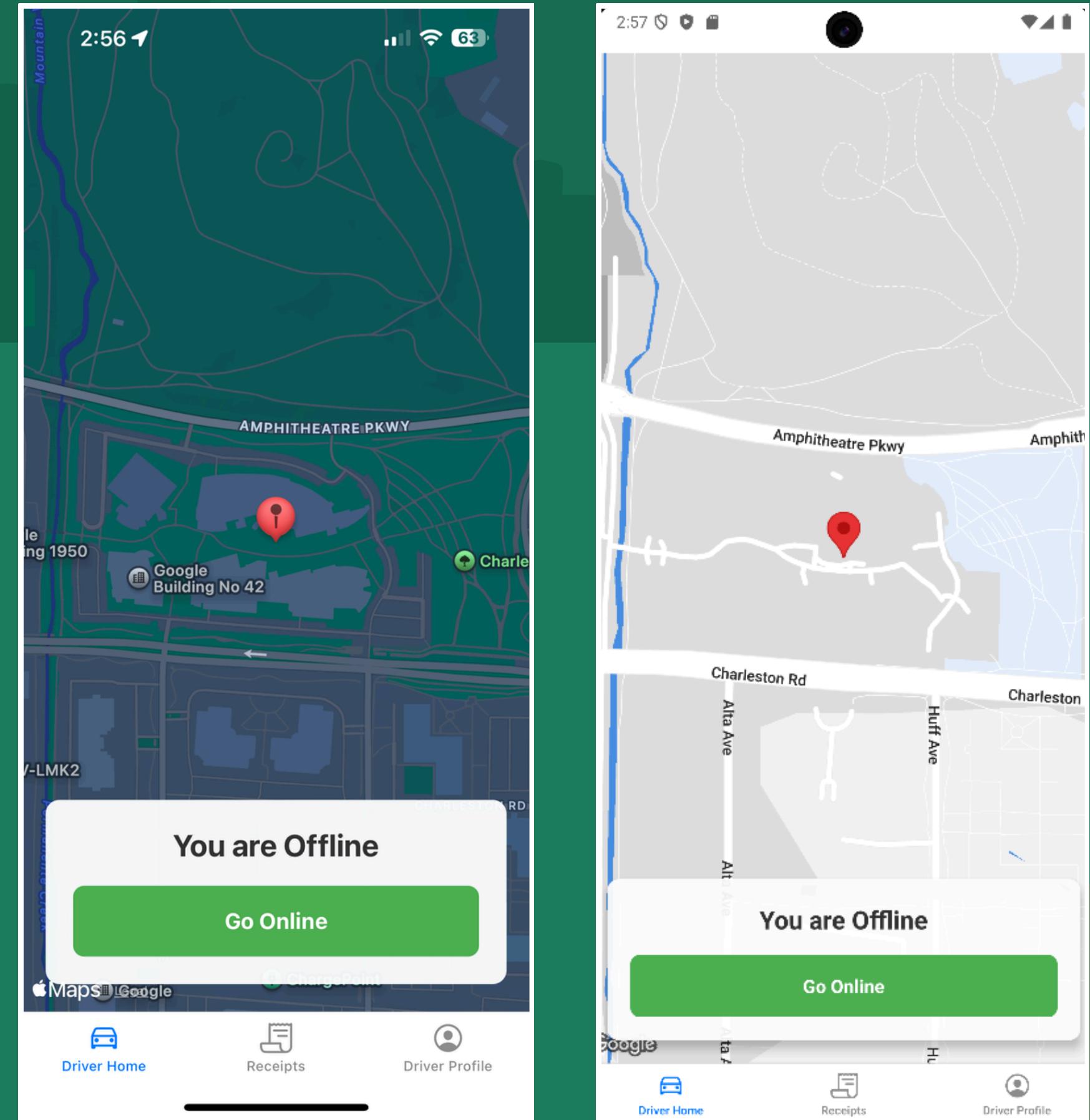
ALPHA AND BETA TESTING

Our **Alpha Testing** round , began in February with a small group of colleagues and friends and **focused ensure all paths are working as intended**. Then pivoted towards **Beta Testing** in March, focusing on the **user experience, ability to perform actions, and performance (such as latency)**.



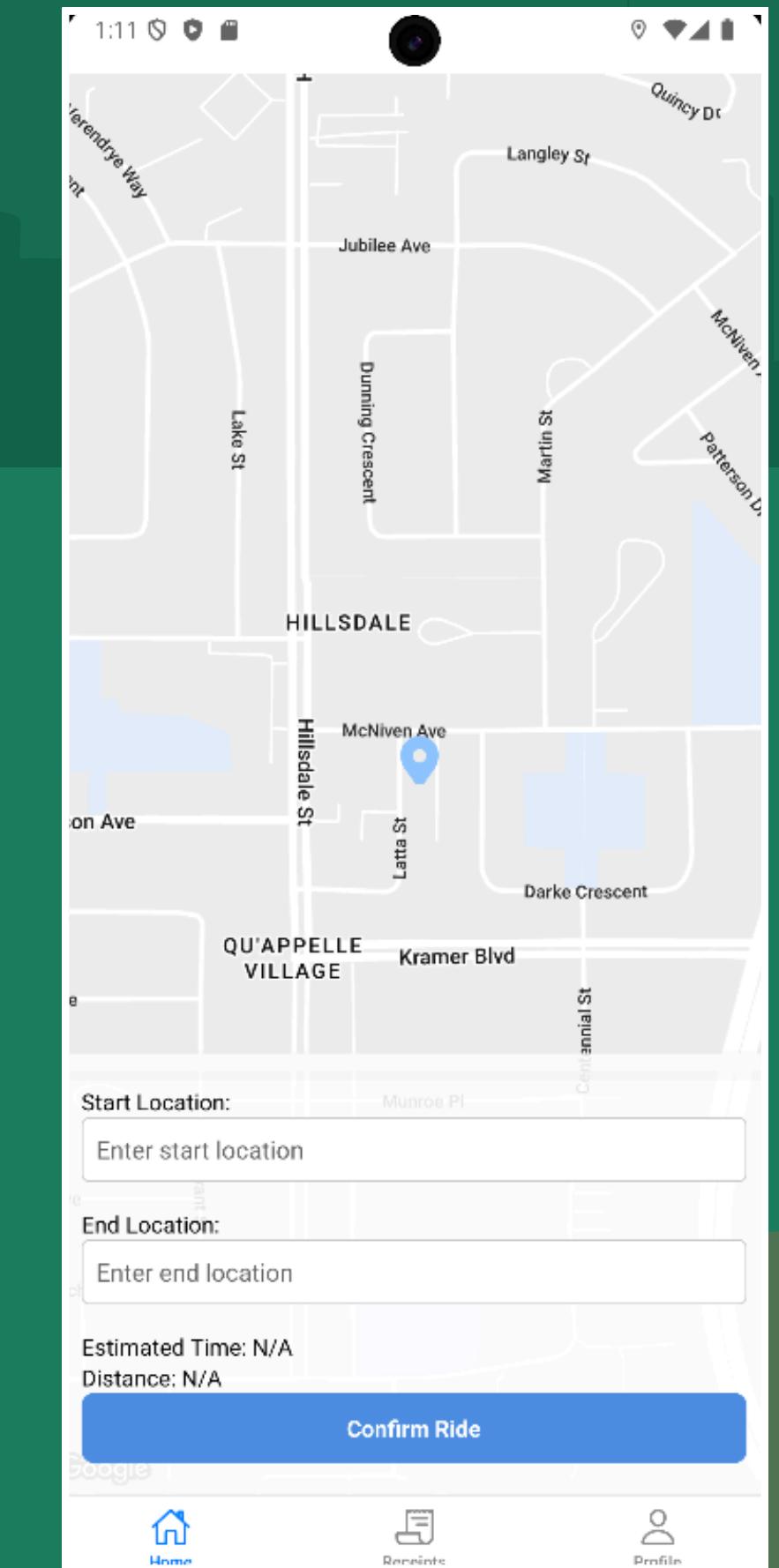
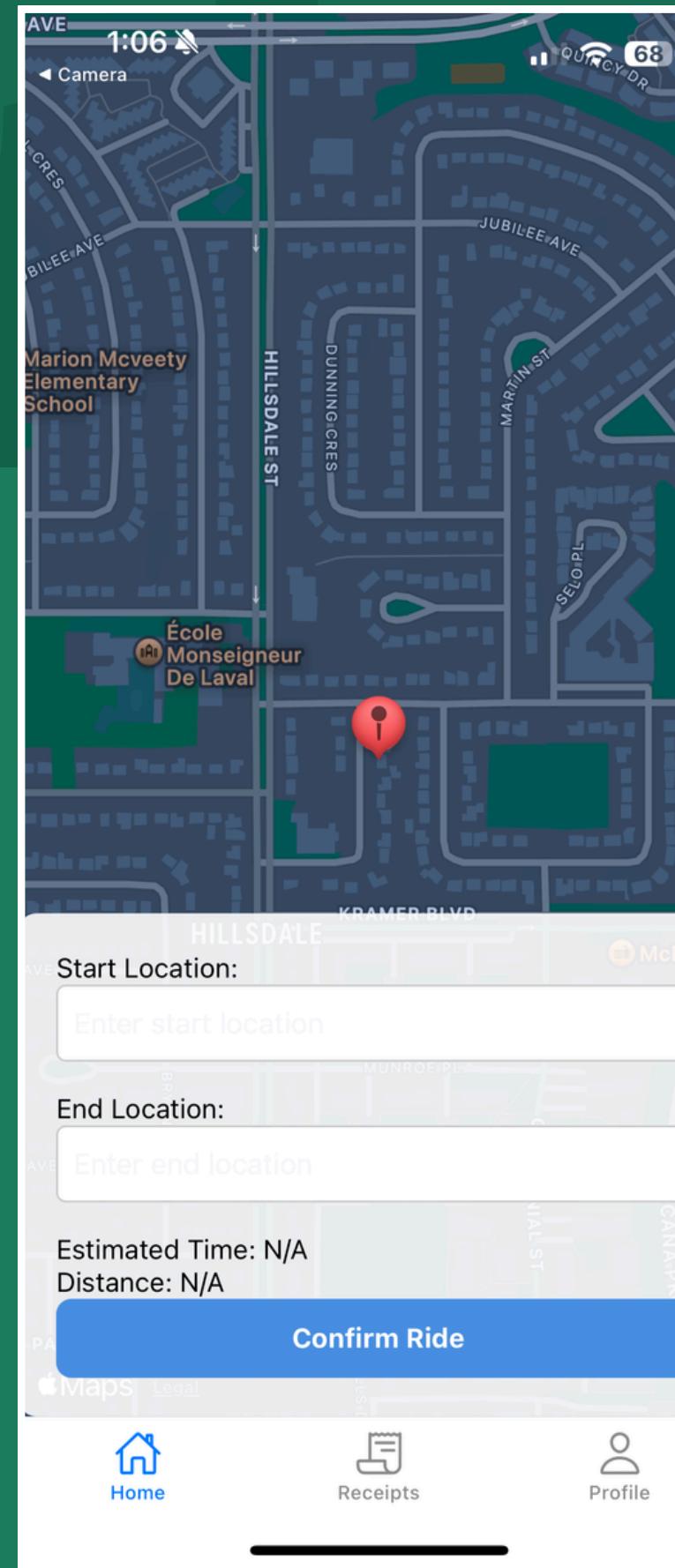
FINAL MOBILE DESIGN (DRIVER)

07.



07.

FINAL MOBILE DESIGN (RIDER)



FINAL DESIGN WEBSITE

07.

 Fleet

Home Drivers Riders 

Fleet

A fair ride-share alternative. Experience reliable and affordable rides with Fleet.

[Learn More](#)



0

07.

FINAL DESIGN ADMIN PANEL

Admin Panel

Logout

Maintenance

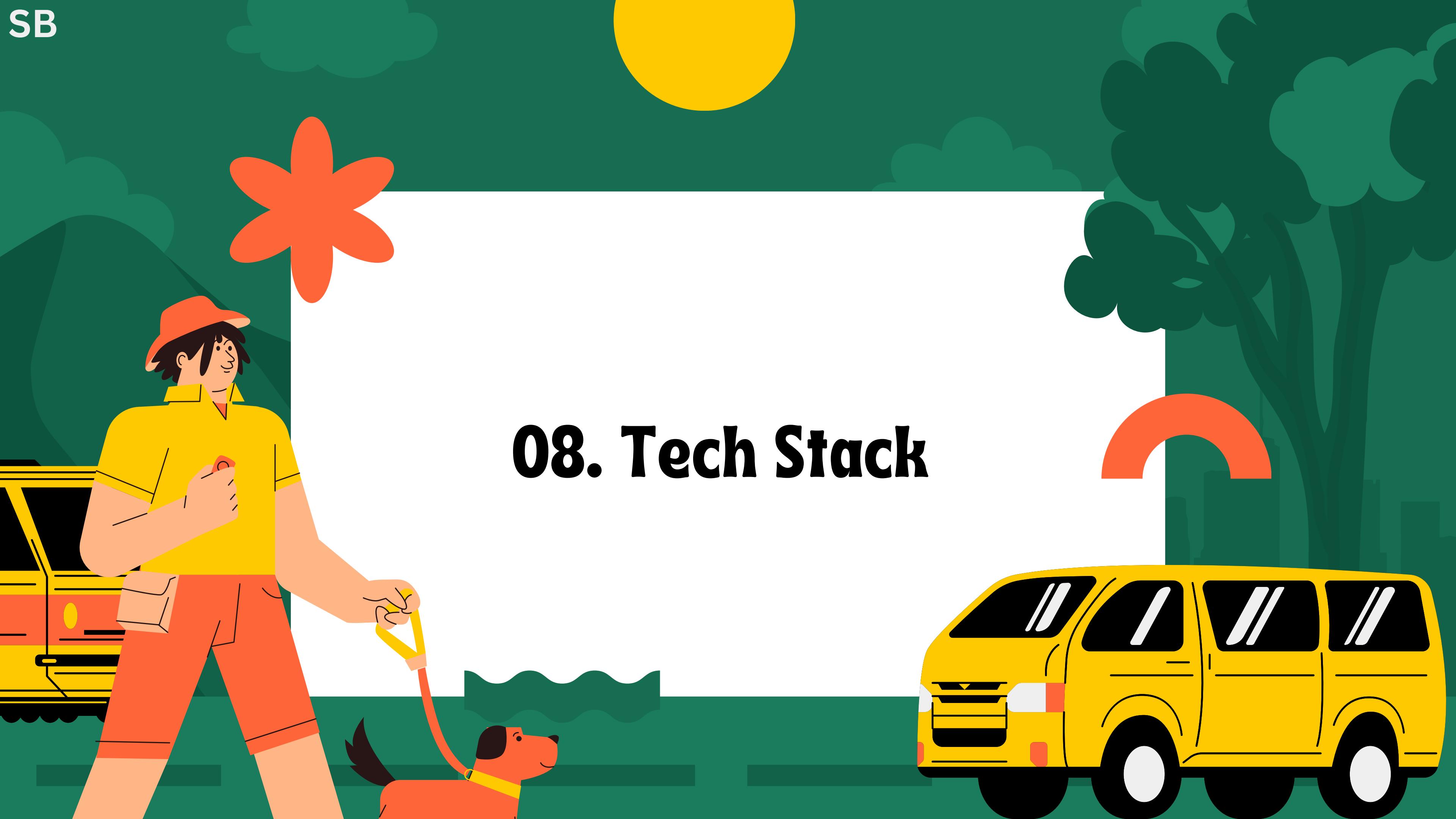
[Live Tracker](#)[Edit Configuration](#)

Playgrounds

Administration

[Riders](#)[Drivers](#)[Payments](#)[Payouts](#)

08. Tech Stack



08.

FRONT END

Mobile Application:

React-Native with ExpoGo was chosen as its a universal framework, which is compatible with both IOS and Android.

Website

React was chosen as we were familiar with React, and the website is a minor portion of our final project.

<https://everyday.codes/tutorials/how-to-do-background-geolocation-in-react-native/>

<https://freebiesupply.com/logos/react-logo-2/>

<https://play.google.com/store/apps/details?id=host.exp.exponent>



08.



BACKEND AND DATABASE

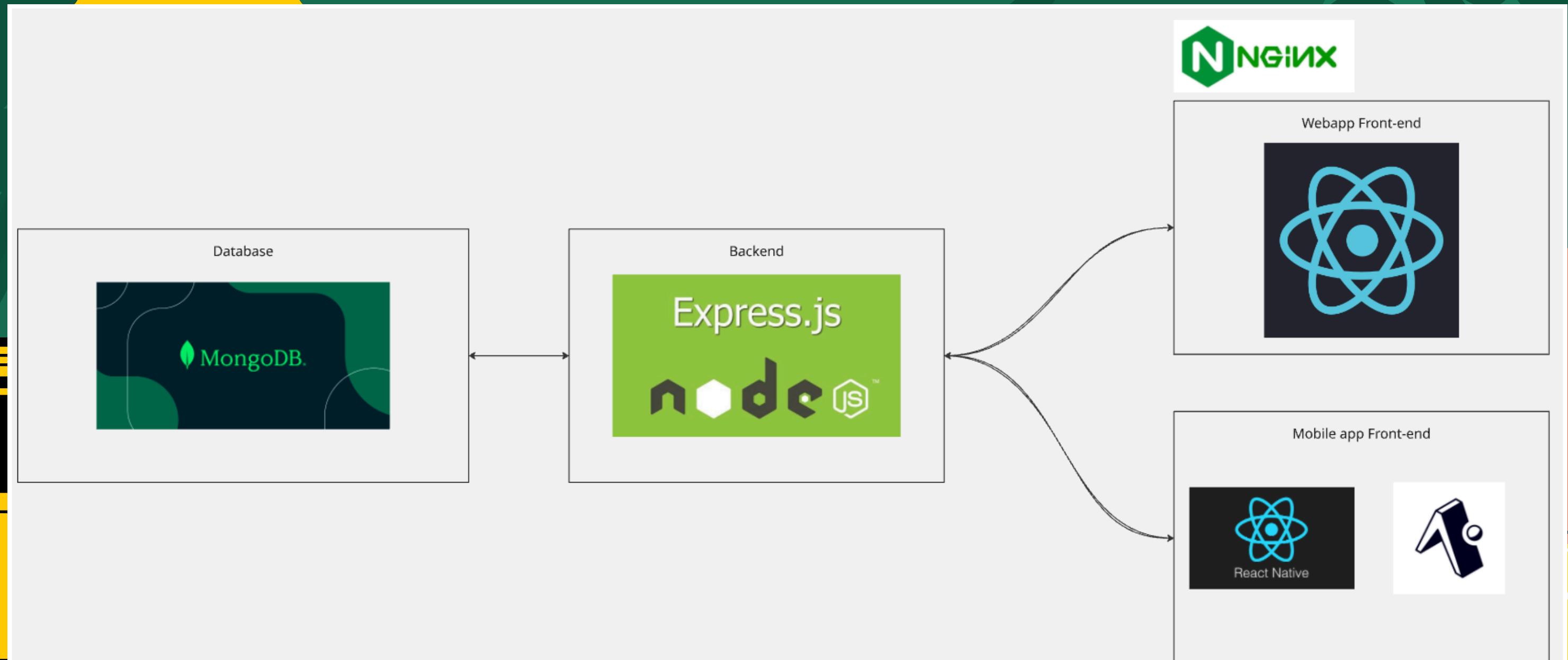
ExpressJS and NodeJS were chosen, as the backend due to their efficient nature and simplicity allowing us to handle a large scope in limited time. Additionally, it is a very lightweight environment which is important as we want to serve many users concurrently.

MongoDB was chosen as our database, due to its open source nature and lack of relationships allowing us to make adjustments on the fly if needed.



08.

ARCHITECTURE



08.

GPS SERVICES

Using Expo we had an **integrated GPS suite called “Expo Location”** that uses native location tracking, thus we can easily locate a phone and track a ride from the Rider and Driver perspective via logging; this is used to review disputes if they arise.

We could not do network based location tracking as it was not precise enough for the use case.

08.



PAYMENT PROCESSING

We used “Stripe” for payment processing and integrated it into our front-end and backend, this allows us to **avoid holding any financial information for any amount of time.**

1. We create a “Stripe Customer” with a “Setup Intent” and link it to our Rider via a GUID.
2. We create a “PaymentMethod” with the Rider’s payment method, attach it to the Rider’s “Setup Intent”
3. We create a “PaymentIntent” which causes a payment to go through and the results will appear in Stripe’s Admin Panel.



08.



HOW PAYOUTS WORK

After processing the payment for the ride from the rider. The balance goes to the Fleet account, where we hold the funds. Drivers are able to request a payout at any time after completing rides.

What happens after a driver requests a payout:

1. Firstly drivers navigate to the **settings tab**, where they can see their **balance available** from **completing rides**. To which they can **request a payout**
2. Next, Fleet's **admin dashboard** receives a **request to payout the driver**.
3. An **Fleet admin** will then **process the payout via e-transfer**, then **mark the request as "paid out"**.

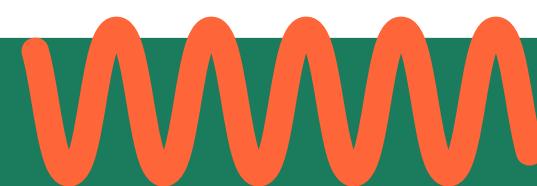


08.

AUTH AND ENCRYPTION

Authentication: We use JWT (JSON Web Token) based authentication for secure user identification and session management, with separate token handling for Riders, Drivers and Admins.

Encryption: We implemented TLS/SSL encryption for all data transmission, while locally sensitive data is protected using the native encryption capabilities of expo-secure-store, finally all sensitive data (such as passwords) is stored as cryptographic hashes within the database. (using Bcrypt)





09. Performance Testing

09.

CURRENTLY OUR SERVERS CAN HANDLE 250 CONCURRENT USERS (125 RIDES) WITH 5 SECOND UPDATE CALLS AND THE LATENCY ENDS UP BEING <1S WHILE CPU USE IS UNDER 50%

THUS WE CAN HANDLE 1000 CONCURRENT USERS (500 RIDES) WITH 15 SECOND UPDATES; AND 2000 WITH 30 SECOND UPDATES.

THIS WAS DONE WITH K6, AND VIRTUAL USERS.



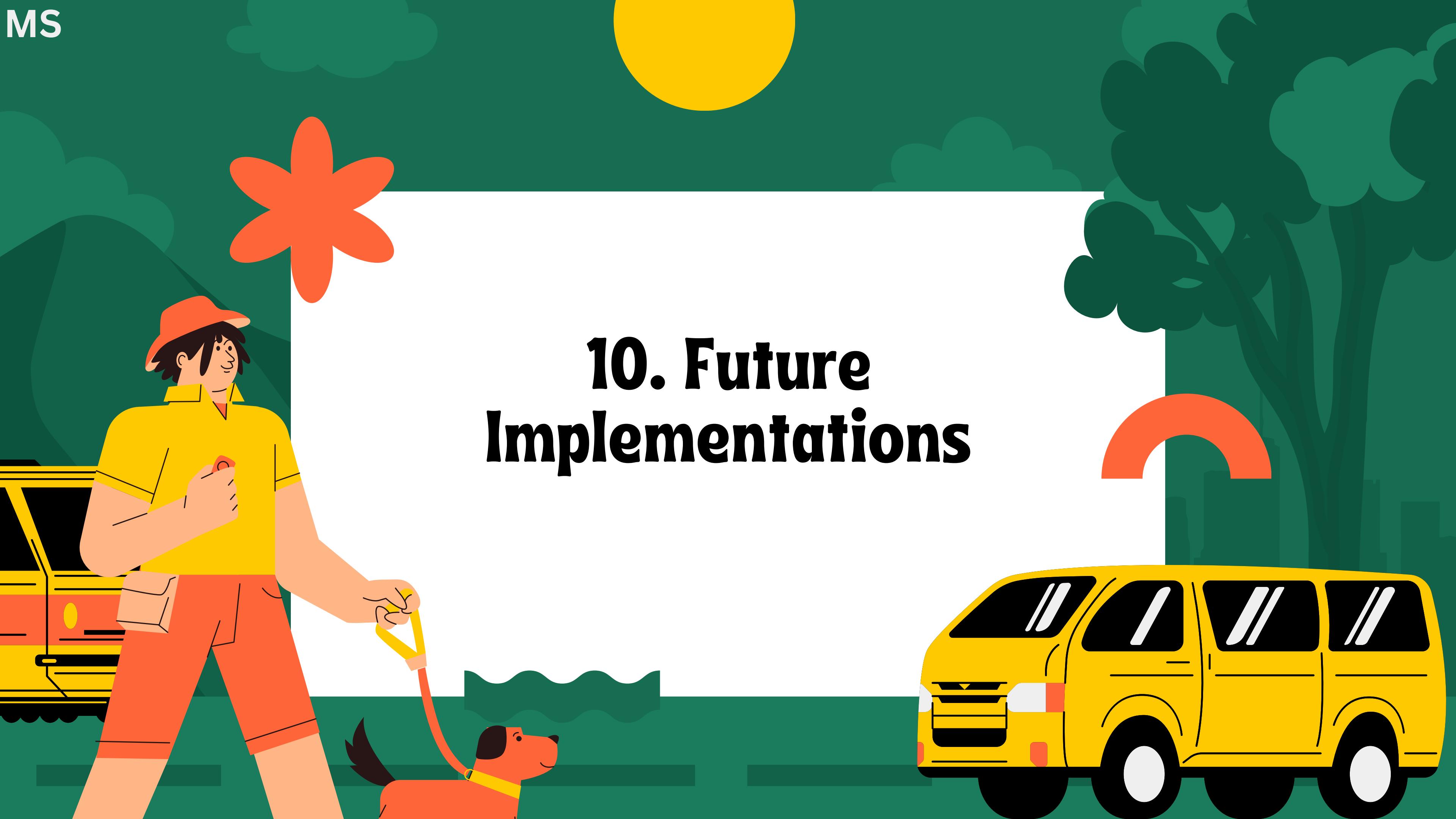
MORE PERFORMANCE TESTING

09.

SUCCESS CRITERIA: LATENCY IS UNDER 1 SECOND PER LOCATION CALL

- **100 USERS:**
 - **100% SUCCESS RATE AT 5-SECOND INTERVALS**
- **1,000 USERS:**
 - **~80% SUCCESS RATE AT 5-SECOND INTERVALS**
- **5,000 USERS:**
 - **~50% SUCCESS RATE AT 5-SECOND INTERVALS**





10. Future Implementations

10.

FUTURE IMPLEMENTATIONS

- **Reduction of code debt**, we focused on moving forward and thus disregarded some design decisions that should have been rectified.
- **Automatic ride completion**, this was the only feature we were not able to complete in time. Thus, currently the rides complete manually.
- **Enhanced testing suite**, a lot of our testing focused on usability and performance and was manual in nature, automatic testing would be important before we go to production.
- **Location Interpolation**, throughout the rider interpolate the location between location update for a smoother experience.
- **Additional Options**, allows drivers to add add-ons such as “drive-through en route” for additional fees.



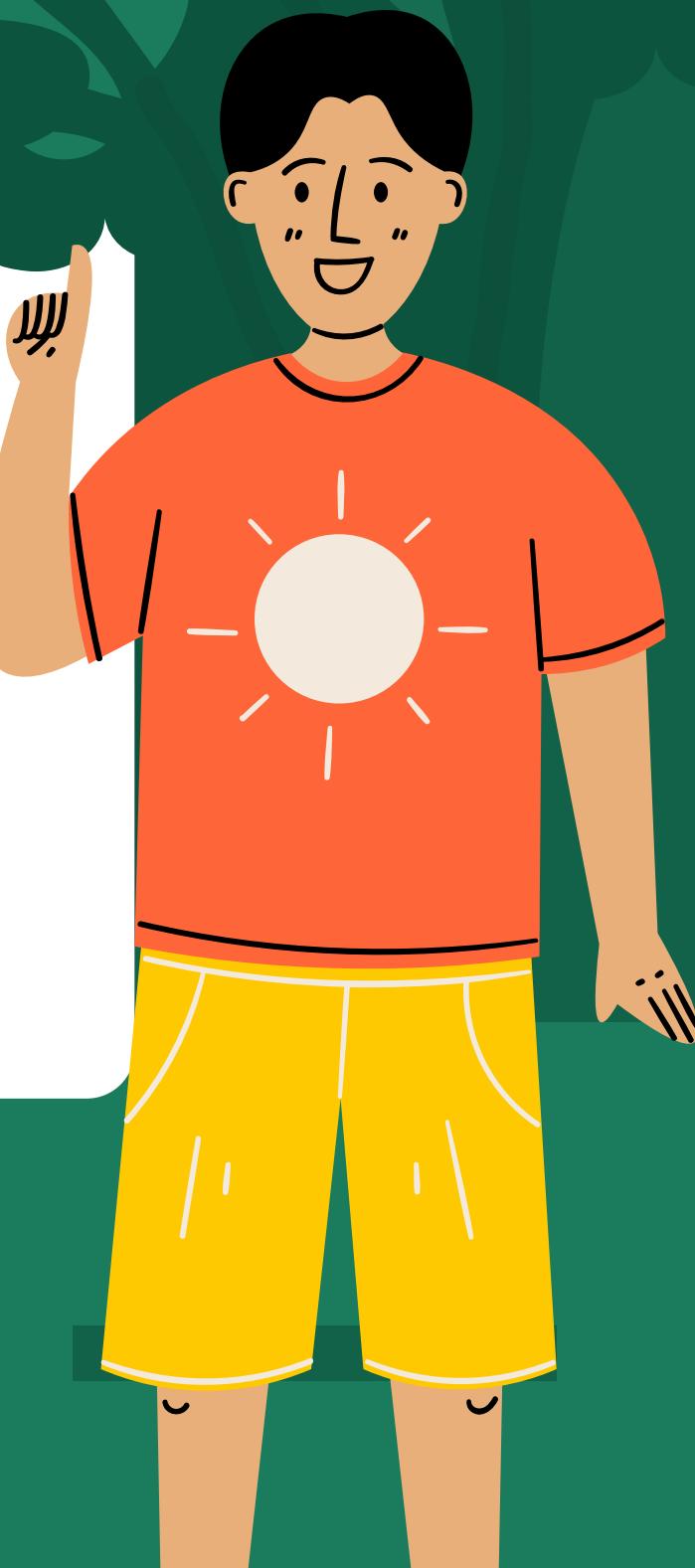
11. Conclusion



11.

CONCLUSION

- **Fleet puts users first** by allowing Driver's to act as true contractors while offering complete transparency to Riders.
- **Fleet is light weight application** able to handle large amounts of users with low costs, thus keeping fees low.
- **Fleet will initially only launch in Saskatchewan** to give us time to scale appropriately.

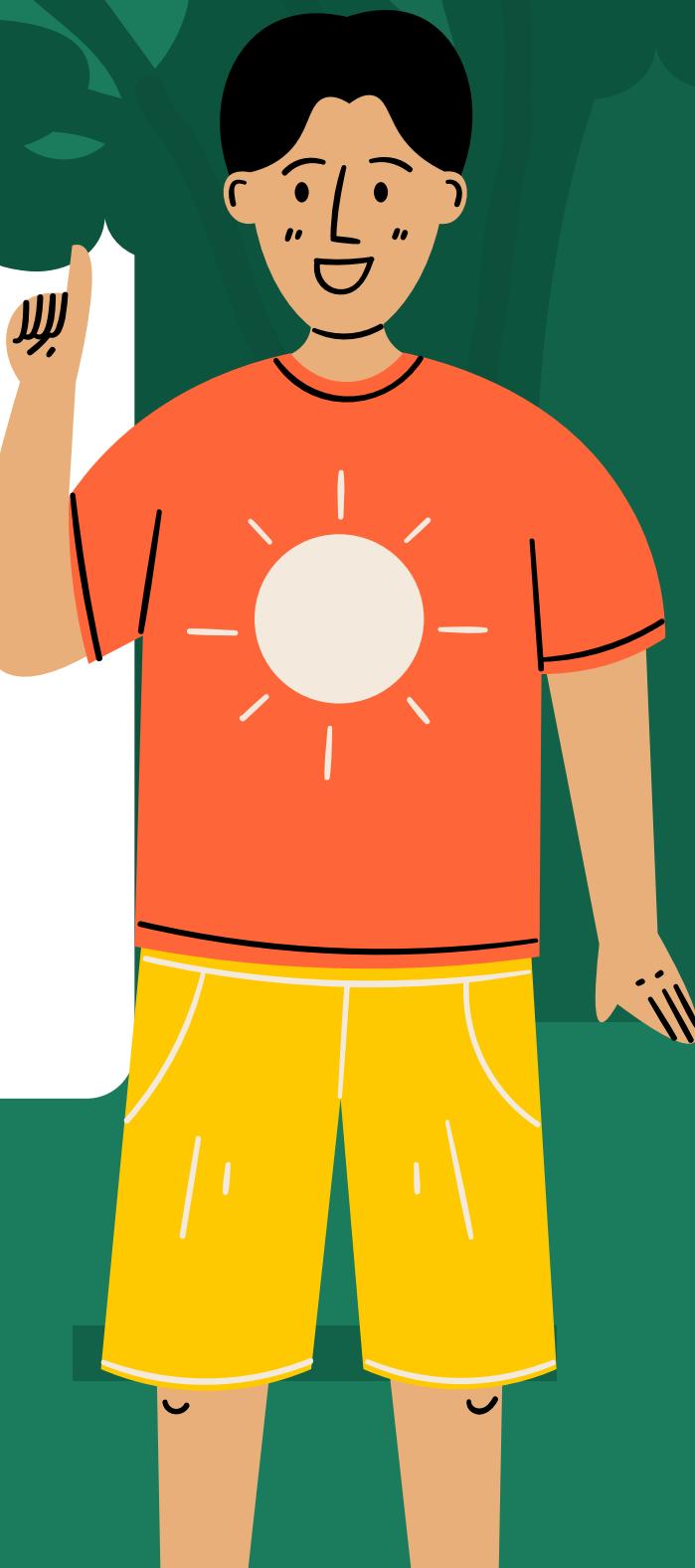


11.

THANKS!

Special Thanks to:

- Dr. Yogesh Sharma, our Project Mentor and Advisor.
- Adam Tilson, our Capstone Professor.
- To all the colleagues, testers, and friends who gave us feedback!



THANK YOU

