सिद्धिमूलं प्रबन्धनम्
भा. प्र. सं. इन्दौर
IIM INDORE

TEKION®

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VELOCIRAPTORS

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BIT Mesra
IIM Indore 2nd year

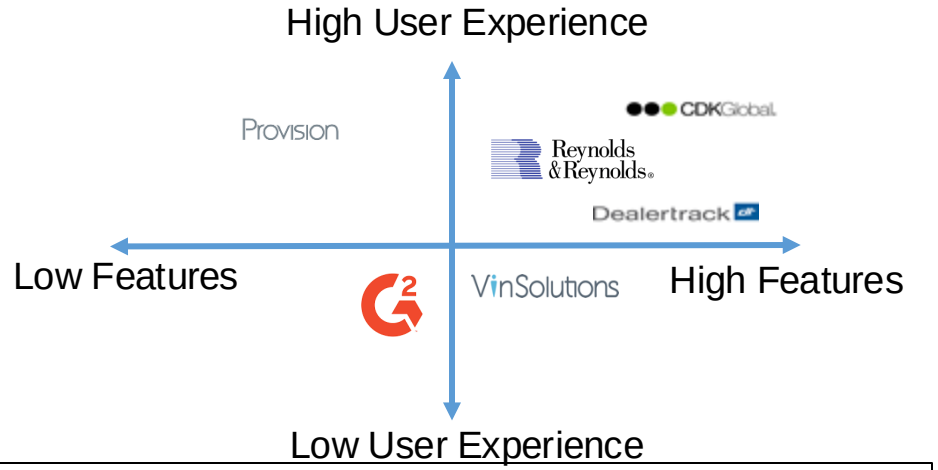
Challenges faced by the client

- Lack of a simple and user-friendly **Checkout Experience** with multiple payment and financing options for end customers
- Inadequacies in addressing the issue of range anxiety in the mind of a potential EV buyer
- Customers do not prefer to complete their purchases online due to difficulty in availing of of post-sales services
- Inability to track customer behaviour and buying trends over an online medium

What we Propose!!

- We propose a flexible payment gateway with multiple payment and Financing options available for the end customer through APIs
- Address “Range Anxiety” through a novel on-web vehicle simulator to better understand capabilities of the vehicle
- One-stop destination for all post sales services like estimated delivery date, registration, accessory sales etc.
- Planned out metrics that track customer behaviour and predict sales trends to achieve target market share

Analysis of Competitive Challenges in the market



We did a strategic analysis assessing the strength and weaknesses of current and potential competitors. We did an analysis of 6 competitors, 3 of which are strong

SWOT Analysis

Strengths
- Availability of latest NLP software for chatbot to ease user access
- Offers API integration services

Weakness
- In-person training and documentation unavailable
- Auto Dealer Accounting Feature unavailable

Opportunity
- Develop a system to help clients combat range anxiety in their end customers
- Provide multiple and easy financing options to the end-consumer

Threats
- Competitors are providing integrated easy financing options on their platform
- Lack of effective product metrics to track market share trends

Competitor analysis of leading competitors(US)

Features	CDKGlobal	Dealertrack
Easy Checkout Experience	✓	✗
Post Sales-Services	✗	✓
Multiple Payment Options	✓	✓
Credit Services	✓	✗
Provide Invoice	✓	✓
Solutions for Range Anxiety	✗	✗
Mobile App	✗	✓
Discount Coupons	✓	✗

Balakay
Age : 26
Occupation : Software Engineer
Location : Miami

Motivations -
- Commute to office daily and go back
- Can go for short out of town weekend trips without worrying about battery life
- Wants to buy a modern, hi-tech vehicle
- Feels that buying and EV online is a more convenient option

Goals -
- Find the best financing option to buy his next vehicle
- Ensure that his new EV has the required speed and range for his needs

Pain Points -
- Worried about the quality and reliability of after sales services due to lack of a human POC
- Has no way to confirm if the range of the vehicle can actually suffice his needs

Jay Quellin
Age : 32
Occupation : Housewife/ Mother
Location : Seattle

Motivations -
- Pick-up/Drop her children to tuitions, school
- Travel around the city conveniently and at a reasonable cost
- Pick-up/Shop groceries and store then conveniently

Goals -
- Find if the new vehicle meets all her requirements
- See how the new car looks after all the customisations have been incorporated

Pain Points -
- Worried about the regular maintenance, roadside assistance and servicing of her vehicle
- Wants to know the boot space and safety features of her vehicle
- Worried if battery range is sufficient for her needs

Ay Ay Ron
Age : 27
Occupation : Travel Blogger/ Influencer
Location : Las Vegas

Motivations -
- Concerned about the damage to environment due to driving internal combustion vehicles
- Wants to buy a low-polluting, classy Electric Vehicle

Goals -
- Buy an electric vehicle that will not create range and battery based issues on his long trips
- Concerned if there are adequate payment options available in the online medium for easy payment and financing of his car

Pain Points -
- Concerned about regular maintenance bookings and help after purchase
- Has less knowledge of driving techniques to increase range of his vehicle

How Might We Statements?

To open up discussions for brainstorming and ideation where ideas to solve the challenge are explored

- How might we create a clear and easy to use UI for checkout?
- How might we gain the trust of the user on our vehicle?
- How might we create a minimal experience, such that the customer gets what they want quickly
- How might we convince the end customer about the effective range of the vehicle
- How might we provide the best financing deals to the customer's fingertips?
- How might we reduce the time taken by the customer for checkout?

User Journey Map

Awareness → **Research** → **Compare** → **Choose** → **Post-Sales Services** → **Feedback**

- Selecting the type and category of vehicle
- Deciding upon a price range
- Search various online portals

- After selecting a vehicle, adds vehicle to cart
- Check for credit options, offers and deals
- Proceeds to Check-Out

- Places Order
- Receives Estimated Delivery Date
- Purchase accessories, vehicle registration and insurance

Buyer visits the website

Scrolls through the features to select a vehicle

Log-in through email or phone

- Use on-Web simulator to understand vehicle range and features
- Book Test-Drive
- Customise preferences and browse through various available accessories

Provide financial and personal details for offers and financing

Check-Out

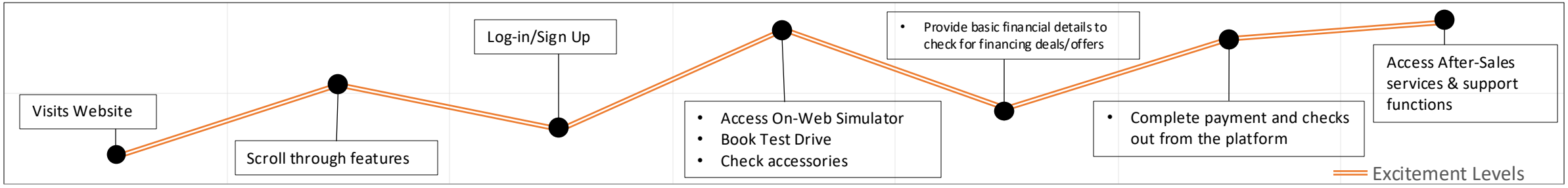
- Select Financing deal/offer
- Pay via multiple payment options

Post Sales Services

- Order Delivery status
- Online Registration and paperwork
- Buy Insurance
- Browse and purchase additional accessories for your vehicle

- **Features like on-web simulator, financing options are not accessible without sign-up**
- **Buyer preferences are tracked through cookies for upselling during final purchase**
- **Check-Out available customisations and accessories available with the vehicle**

- **A sales executive is assigned to the customer**
- **Connect with the customer via phone or e-mail to address concerns**
- **Keep track of individual choice and preferences of the customer through their website history**



Mindset	• View features of the vehicle like price, range etc/ • Check for available payment options	• Curious to know more about the product • How much can I spend on my vehicle?	• What is the new information I can get about the vehicle after signing up?	• What are the capabilities of the vehicle? • How do I know more about the vehicle?	• Do these offers/deals meet my requirements • Should I search for better offers	• How do I track my order? • How do I complete the paperwork associated with the purchase	• What post-sales services are available for me to explore?
Opportunities	• Display availability of simulator to alleviate doubts • Show availability of Easy Finance	• Track user interest in specific offerings • Encourage user to sign-up using	• Encourage Logged-in user to use simulator • Display relevant information to garner the user's attention	• Encourage the user to check for Finance Deals by entering basic details	• Provide deals from multiple Finance providers • Offer special discounts for specific providers	• Provide easy solutions to complete paperwork like insurance, registration through OCR	• Push sales of accessories to generate revenue • Encourage the user to install app after purchase

Empathy Map Canvas

What do they THINK and FEEL

The users think about the various electric vehicles and they compare the pros and cons of each vehicle

The users feel excited about the idea of owning an Electric Vehicle and they feel good about helping the environment

What do they HEAR

The users hear about different Electric Vehicles from their friends, family, colleagues and social media

The users also hear about various charging issues, availability of stations and different incentives provided by the government

What do they SEE

The users see the different Electric Vehicles available on the market and compare the features, price and range of the various options available. The also go through the pros an cons of owning an Electric Vehicles over the traditional Internal Combustion Vehicles

What do they SAY and DO

The users say that they want to buy an Electric Vehicle because they want to save money on gas, as well as play their part in saving the environment

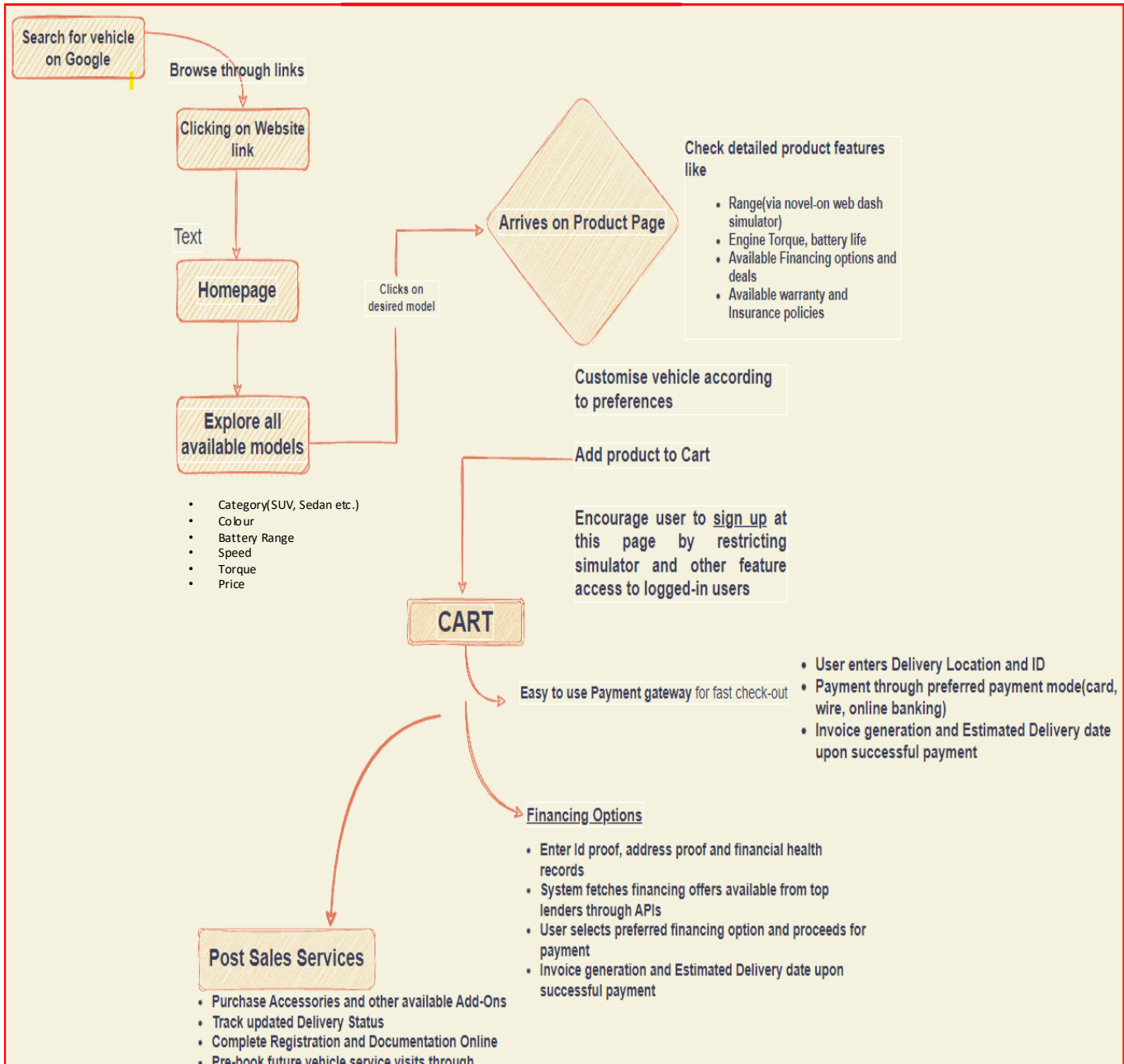
PAINS

1. Vehicle Range
2. High cost of EVs
3. Lack of Charging Stations

GAINS

1. Savings on gas
2. Contribute to the environment by owning an EV

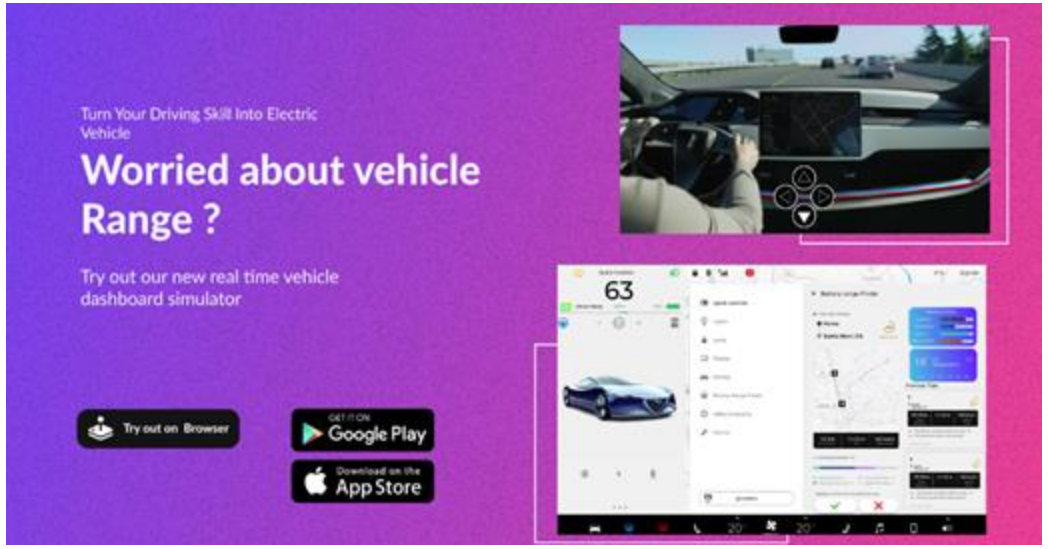
End - User Flow



Key Reasons behind Range Anxiety in Customers include:

- Lack of knowledge and experience in the world of Electric Vehicles
- Lack of information regarding availability of charging spots for electric vehicles
- Lack of Education in efficient driving techniques to maximise range and battery life
- Lack of easily available road side assistance for Electric Vehicles

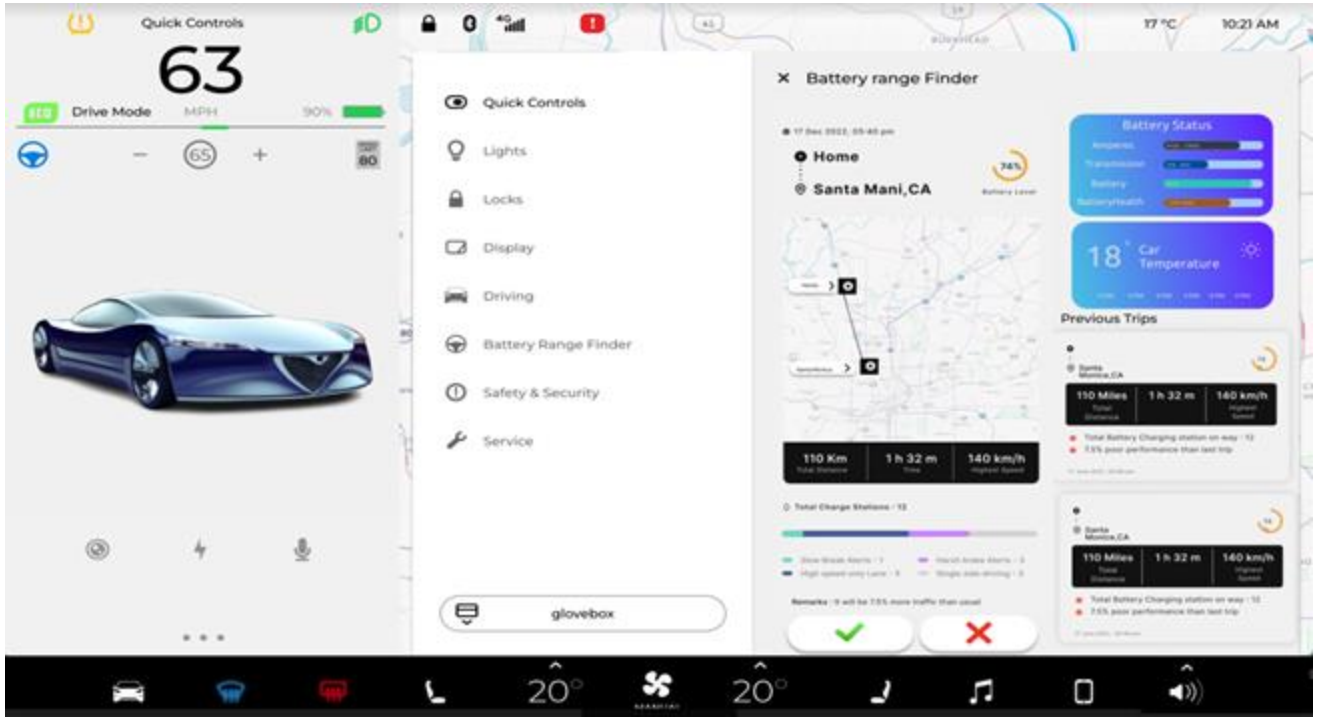
Sources: https://www.makeuseof.com, www.business-standard.com



Simulator access strategy:

- Access to the simulator will be restricted to users who have signed in
  - This will encourage more of the website's incoming traffic to sign-in
  - Will drive more traffic and create more awareness about the brand due to the novelty of the offering
- Access to Simulator will be available via Apps through Apple App Store(iOS devices) and Google Play Store(Android Devices)

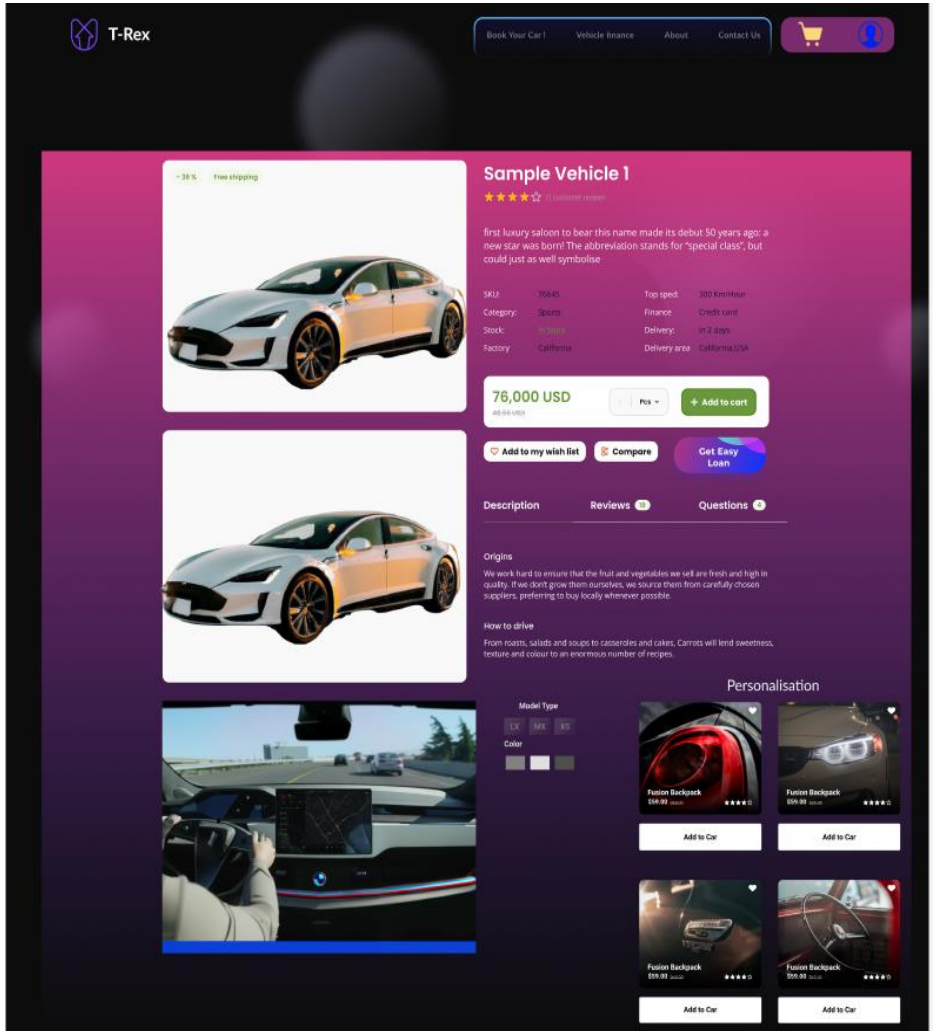
Online EV Simulator available on Website/App



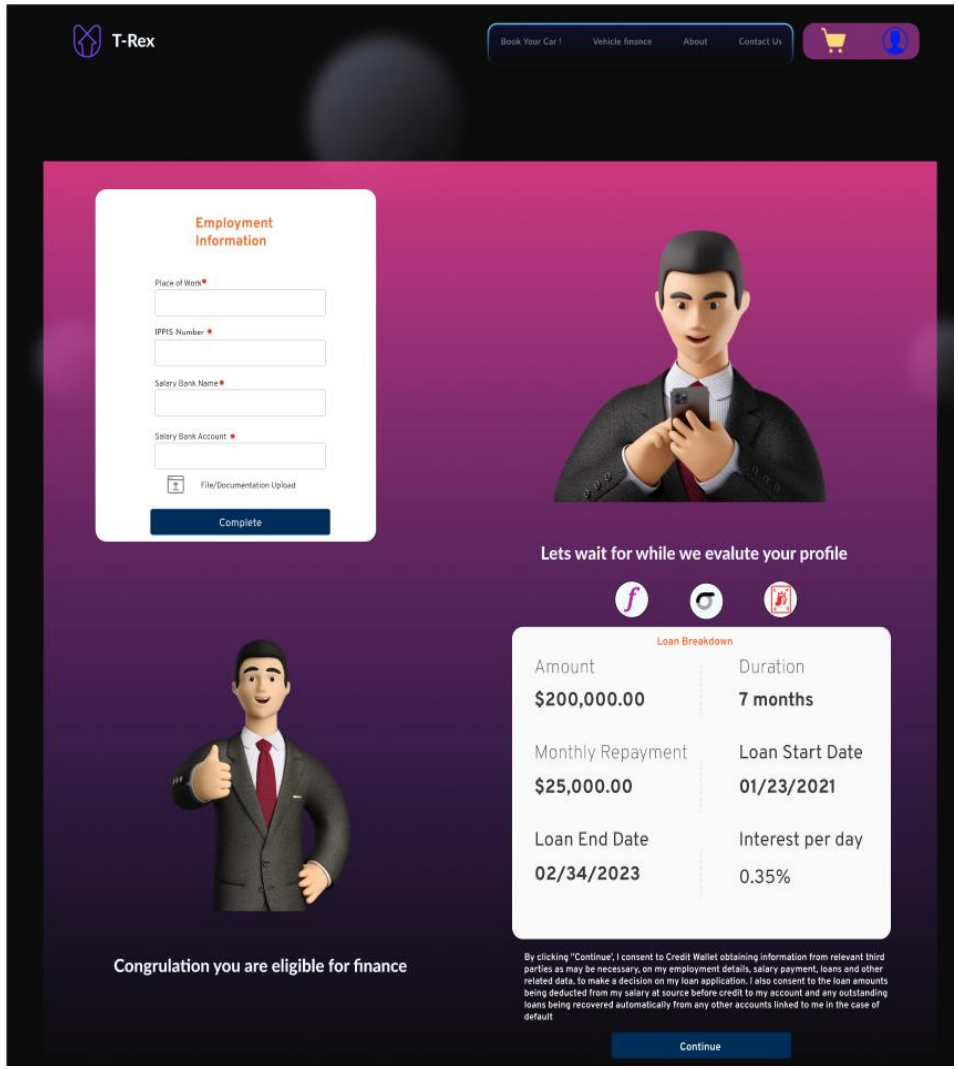
Features include:

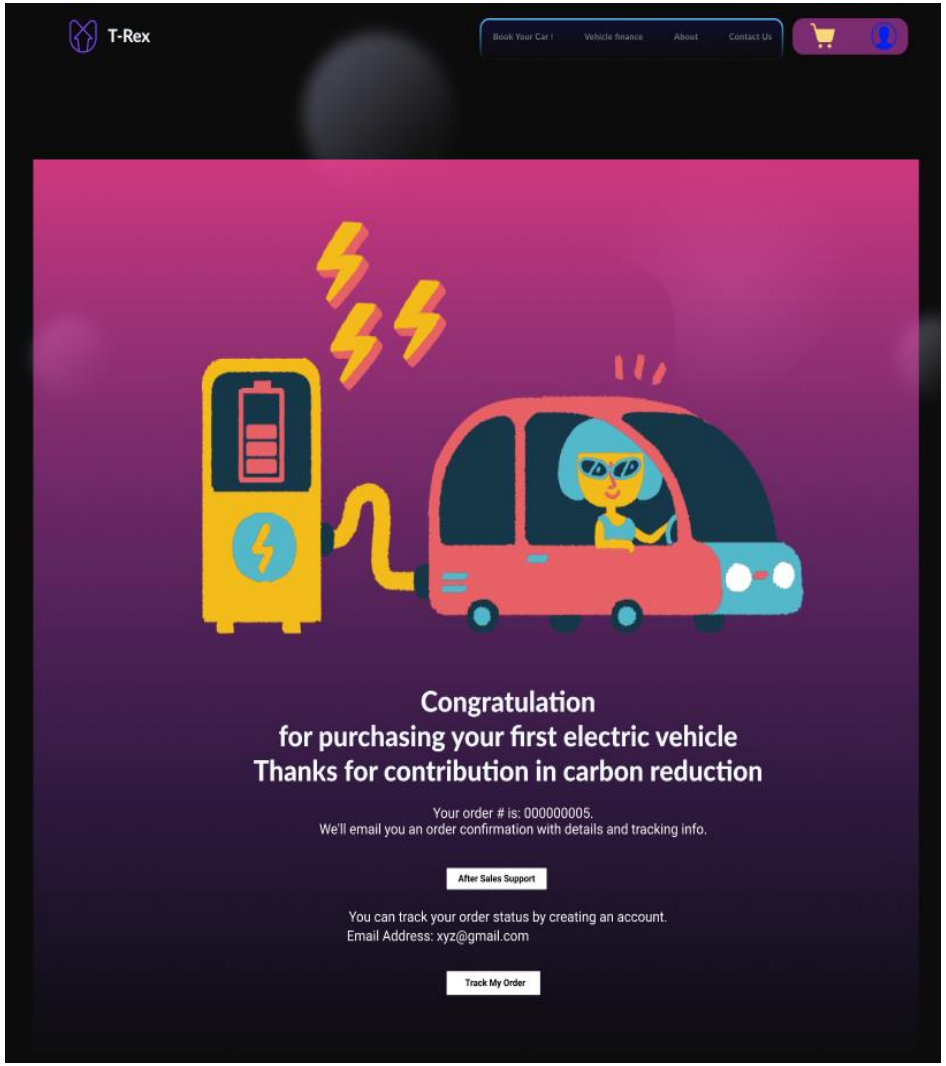
- Enter **Custom Location** on Map and **available battery percentage** on simulated vehicle dashboard to get **route, charging points and estimated time of journey**
  - Connect to EV Driver assist maps like EVgo, Chargeway, Plugshare, Chargehub with the help of APIs and demonstrate vehicle range capabilities
- **360° view** of the car interiors
- Try available **customisations and accessories** and see how it looks on your vehicle
- Get a understanding of the basic features and accessories available with the vehicle that will aid in making purchase decision

- Customer clicks on the **Buy-Now** Button to express his intent to purchase a particular vehicle
- Customer also has the option to book a **Test Ride**



- Customer views the product description page along with information like **price, payment options, accessories available**
- The end customer can also apply for easy financing and check existing offers. These services will be enabled through the use of APIs





- Customer enters basic information like Place of Work, IPPIS Number, Proof of address etc.
- After the basic details have been entered into the system, APIs are used to check for Financing offers, which are then displayed to the customer

- After finalizing mode of payment, the customer gets a invoice and access to post sales services like tracking order delivery, vehicle registration, etc.
- User also gets access to post sales services like choosing accessories, check maintenance schedules and vehicle health

Estimated Volume of Online Electric Vehicle Sales in US (in 1000)

	2021	2022	2023	2024	2025
Battery Electric Vehicles	32.42	40.49	51.28	63.81	79.38
Plug-in Hybrid Electric Vehicle	8.38	8.59	9.91	11.23	12.73
Total Sales of EV in US	40.80	49.07	61.18	75.04	92.11
% Sales of vehicles in online	30%	33%	37%	40%	43%
Online vehicles sales	12.24	16.315775	22.3307	29.8284	39.6073
% of Electric vehicles compared to other vehicles in US	1%	7%	12.00%	17.50%	23%
Electric vehicles that would be sold online	0.1224	1.06052538	2.679684	5.21997	9.109679

Assumptions: The % share of EV among all the vehicles is used as proxy for online sales as well
Notes : Data shown is using current exchange rates. Data shown does reflect market impacts of Russia-Ukraine war.

It is estimated that approximately 9000 Electric Vehicles will be sold in the US by 2025

Focus Metric(L0)

Market Share

L1 Metrics
(Complement L0 Metrics)

- **Reach**
- **Activation**
- **Engagement**
- **Retention**
- **Revenue**

L2 Metrics
(Drive the L1 and L0 metrics)

- Check NPS
- Analyse sentiments on social media
- Track MAU, DAU
- Reviews on App Store

- Happy 1st visit
- Sign-up on platform
- Uses the simulator
- Check for Financing offers

- Repeat visits to access Simulator
- Check for updates on Financing offers
- Asks purchase based queries to chat bot

- Repeat visitor to website
- Open Email/SMS communication
- Refers more visitors to the website

- Successfully purchase EV from our platform
- Completes purchase of accessories
- Books services on the platform

Key Metrics Overview

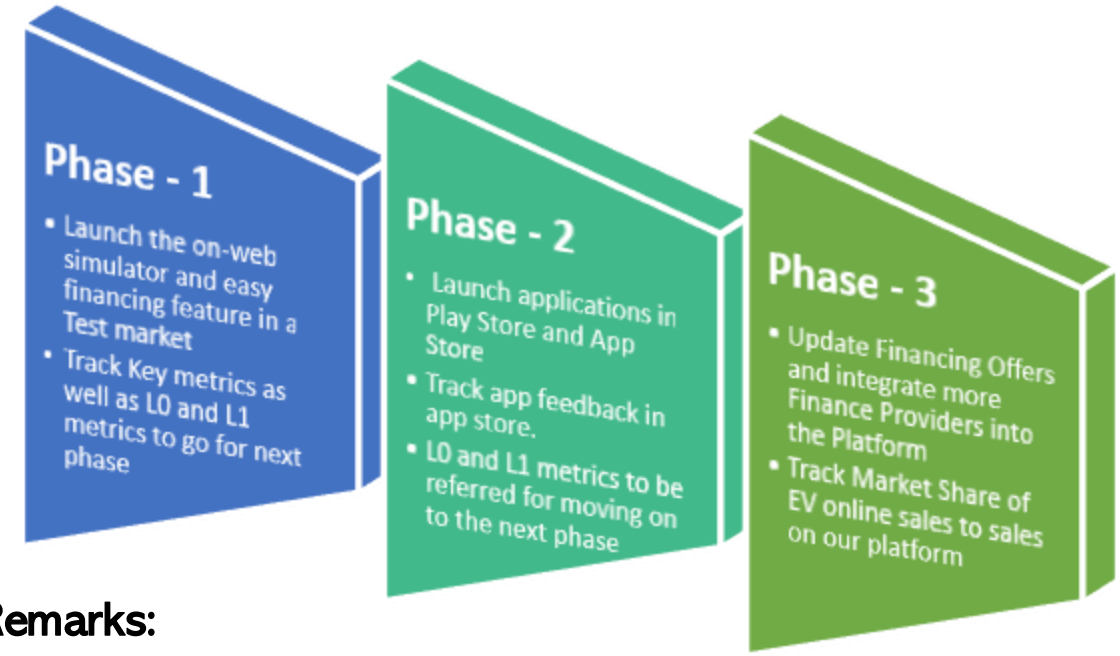
Going the pirate way: **AARRR!!**

A: Acquisition **A**: Activation **R**: Retention **R**: Referral **R**: Revenue

Conversion Metrics

Category	User Activity	Target Conversion%
Acquisition	**Visit Site** (on landing page, stays 10+ seconds)	90%
Acquisition	**Doesn't Abandon** (views 2+ pages, stays 10+seconds, 2+ clicks)	75%
Activation	**Happy 1st visit** (views 3+ pages, stays 30+ seconds, 4+ clicks)	35%
Activation	**Sign-up on platform** (signed-up using phone/email)	10%
Activation	**Access Simulator** (Access the on-web simulator for 15+ seconds)	8%
Activation	**Check for Financing Offers** (Enters basic details to view available finance deals/offers)	4%
Retention	**Repeat Visitor** **(visits the website 4+ times in 30 days)**	3%
Retention	**Click-Through rate** (Open links after email/SMS reminders)	1%
Referral	**Refers 1+ users who activate**	0.5%
Revenue	**User generates min. revenue (purchase accessories)**	0.025%
Revenue	**User generates revenue (purchase Electric Vehicle)**	0.005%

Product Roadmap



Remarks:

- Test market will include major cities like NYC, San Francisco, Boston
- Move to Phase 2 when Acquisition Metrics in the test regions reach 50% of their target conversion values
- Adoption metrics of Application to be tracked
- Compare rate of sign-ups to that of app installation
- Move to Phase 2 when Acquisition Metrics reach 70% of their target conversion values
- Track change Market share of online EV sales periodically
- Integrate more Financing Service providers into the platform
- Additional Marketing and Advertisement expenditure to reach target conversion rates of key L0 and L1 metrics

Product Documentation

Color Palette Selection

The future, through the lens of the past: All the colors used in this UI design belong to the **Retro Futurist** color scheme

- Retro Futurism incorporates futuristic graphics, fading brilliant hues, cyber-inspired writing, and rounded geometric forms.
- Retro-futuristic colors are perfect for an electric vehicle-selling website because they are both modern and stylish
- Additionally, generic colors are used to make the UI more attractive for new age Millennials and Gen-Z
- Electric vehicle is a modern concept, so we used a futuristic color scheme to **garner the attention** of customers between **20 and 35 years** of age

Colour	Hex Code
	#F8F8F8
	#0D0D0F
	#632C67
	#1C1525
	#2E1C3C
	#46244F
	#BA3C7F
	#903274
	#B7B4B5
	#797B7A
	#FF013E
	#0048D9
	#66E02D
	#FF449B

Fonts used

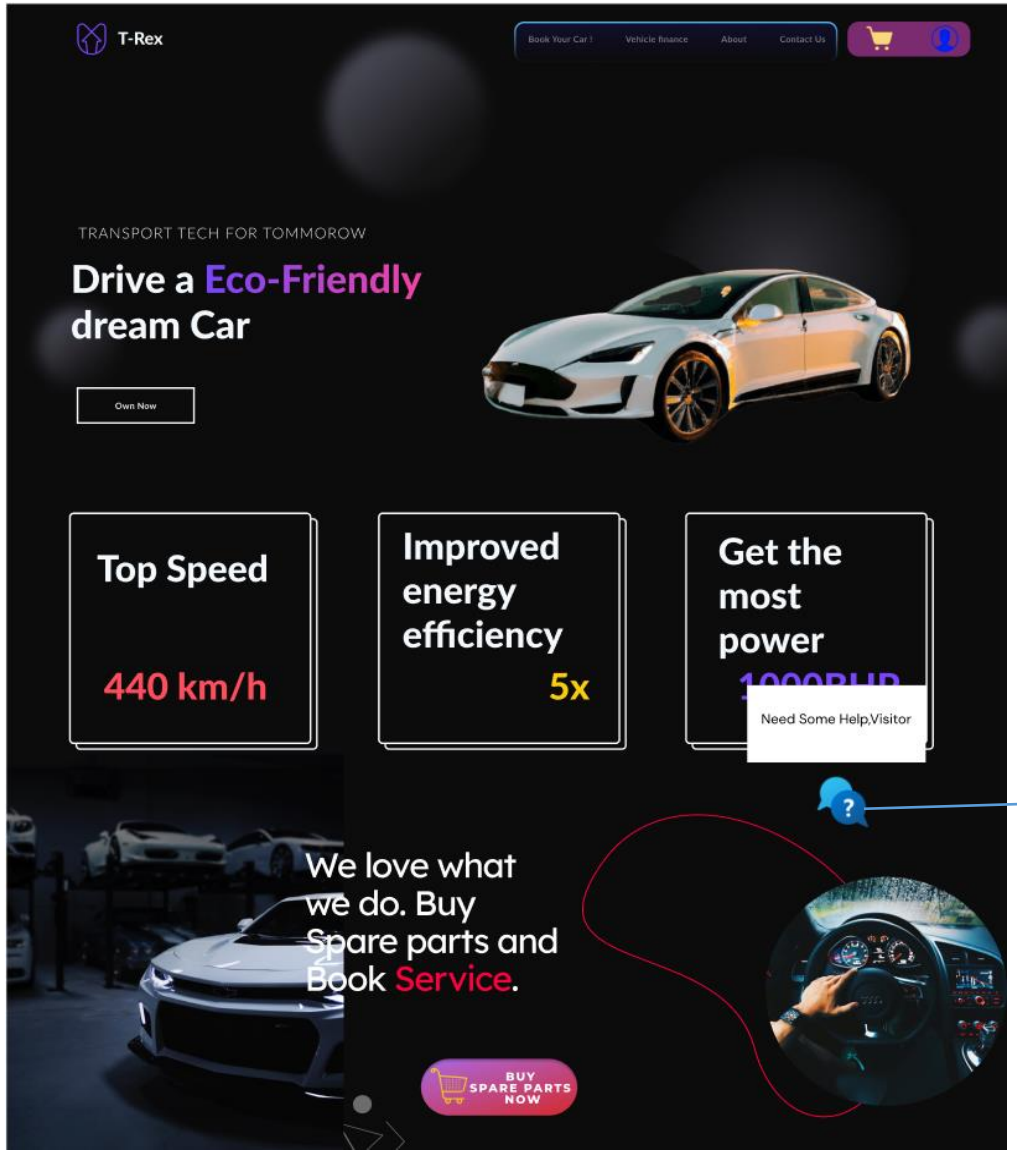
Font Style	Style Utilised
Nunito Sans	Bold I Medium I Regular
Lato	Bold I Medium I Regular
Montserrat	Bold I Medium I Regular

Software Used

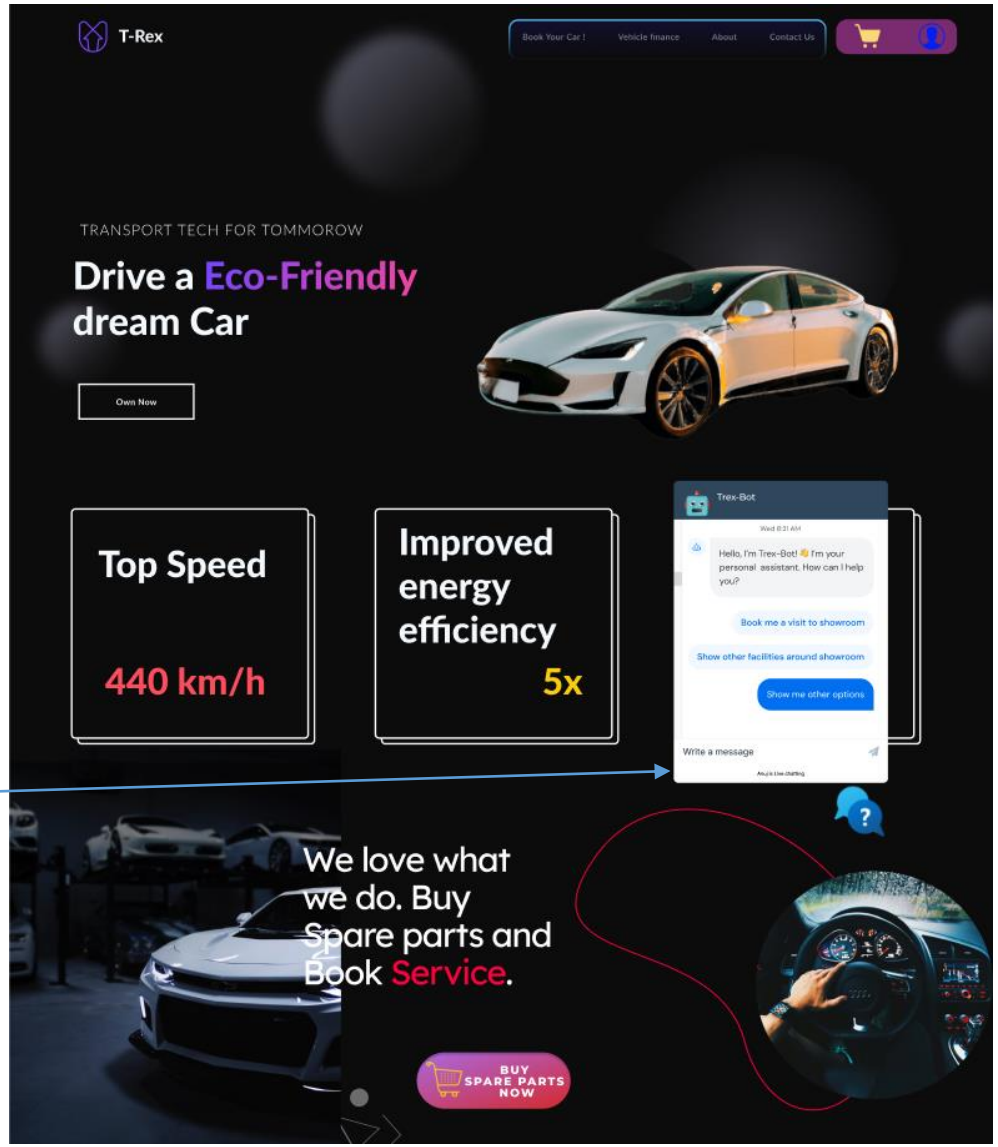
Figma.com | icons8.com | draw.io | Dall.E 2

Thank You

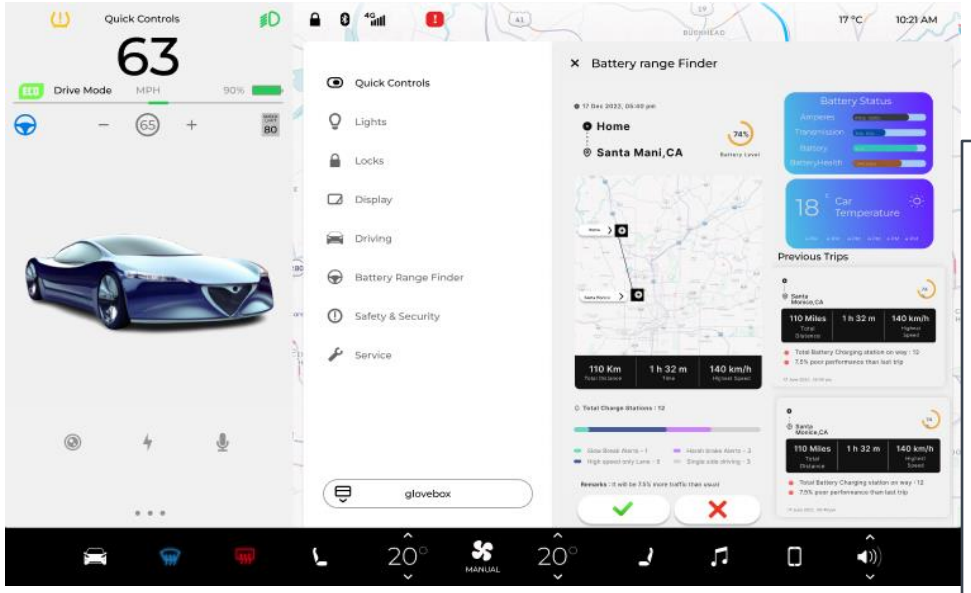
Appendix 1.a (Wireframe Gallery)
Landing Page



- Landing Page of the website
- User can view the vehicle and various other accessories available on the website
- AI enabled chat bot is integrated on the platform to resolve user queries

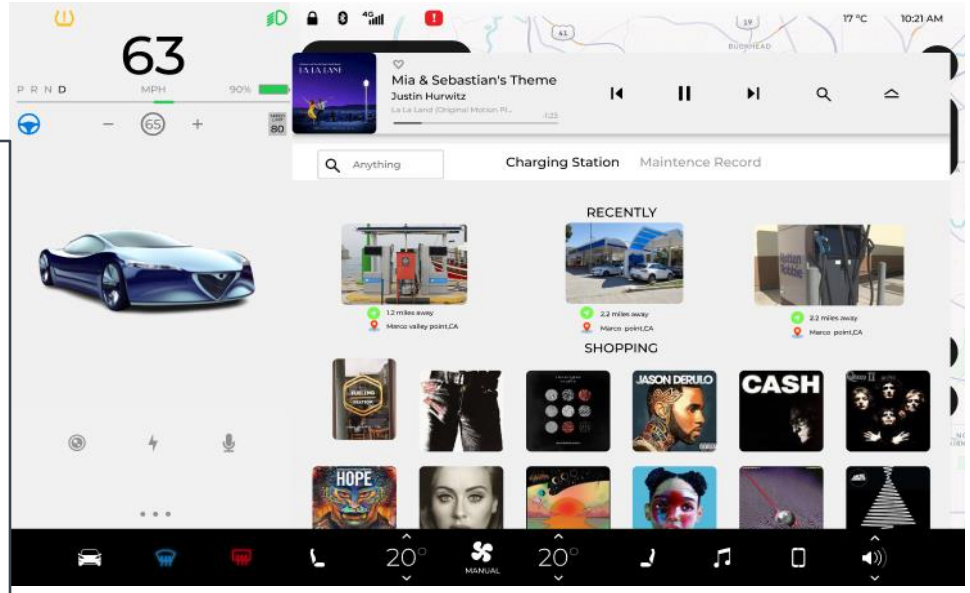


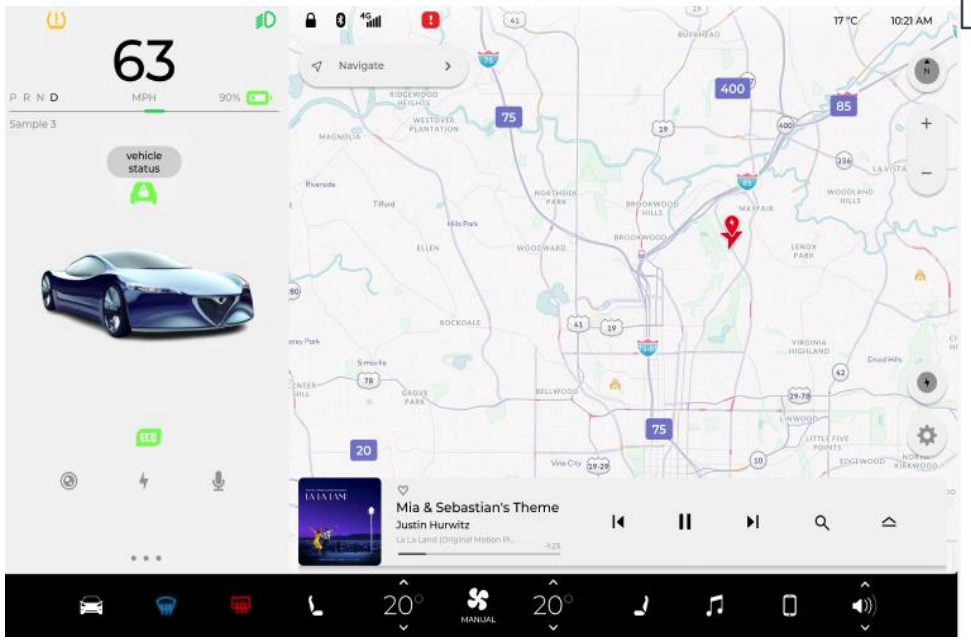
Appendix 1.b (Wireframe Gallery)
Simulated Dashboard

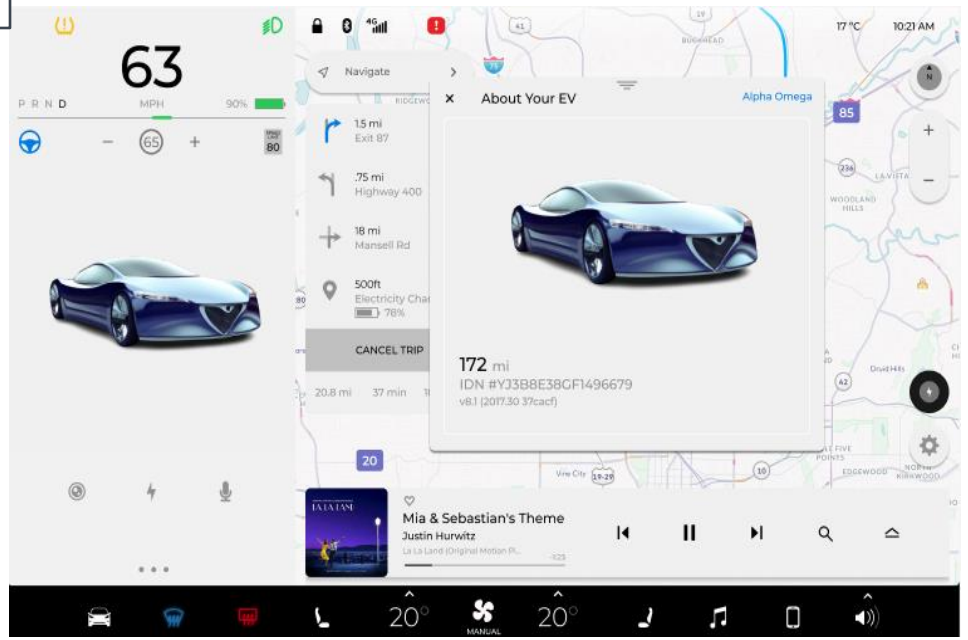


Features-

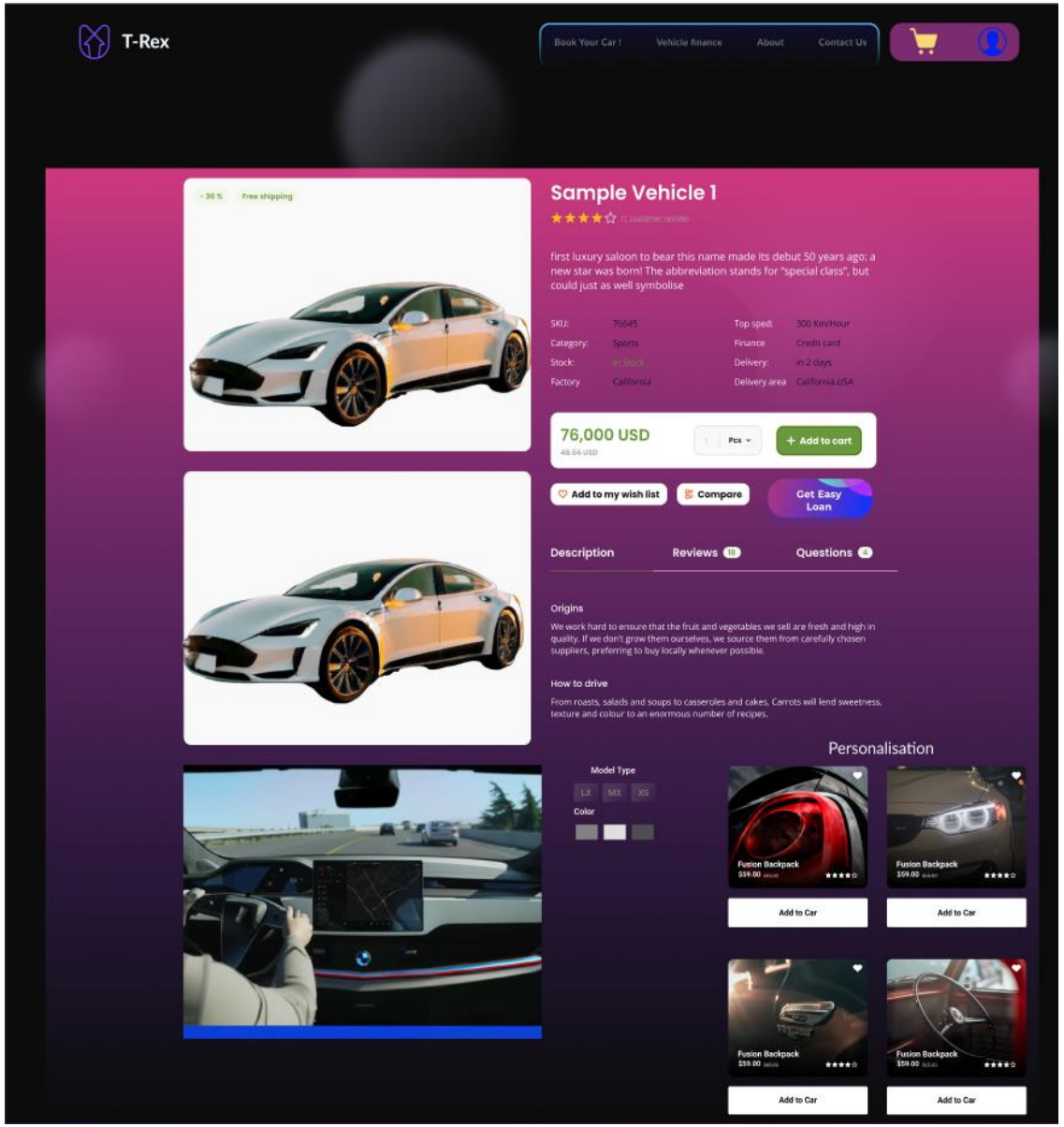
- Recommendation for Nearby Charging station
- Enter Battery Percentage manually to check vehicle range capability
- Access maintenance history from dashboard
- Maintenance history can also be accessed through this dashboard
- Simulate real-time charging scenarios to understand charging time that may help alleviate range anxiety

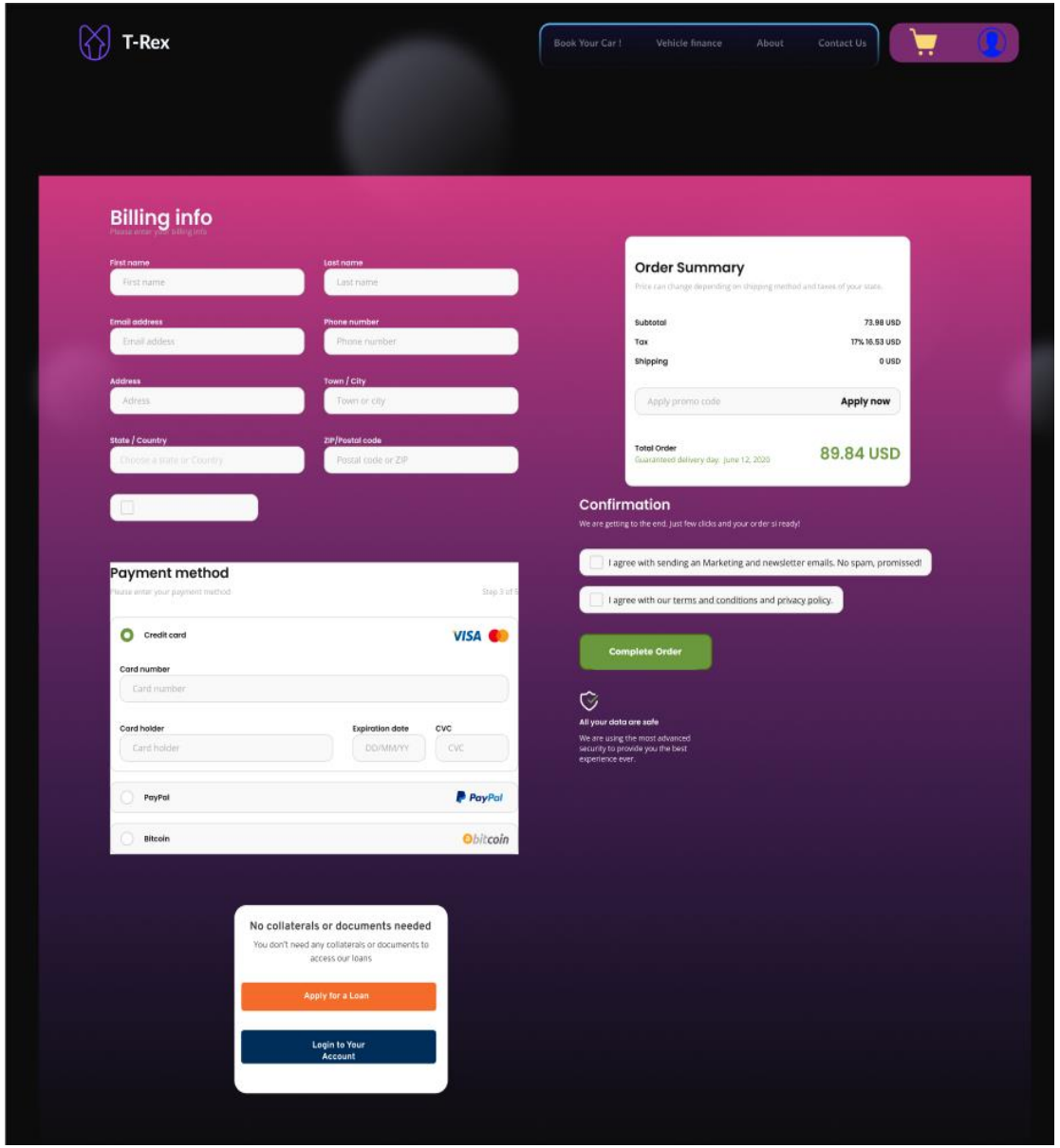




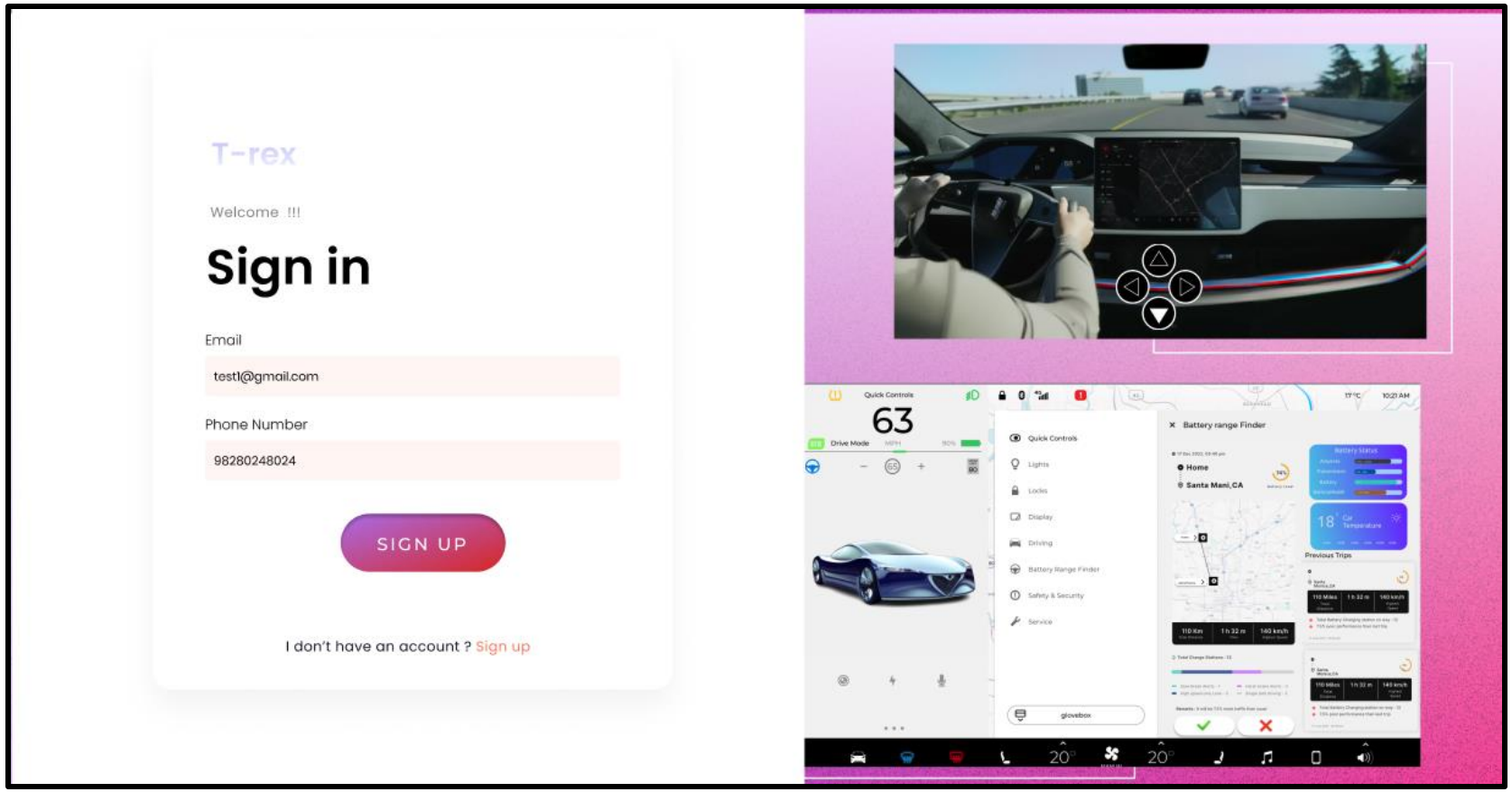


Appendix 1.c (Wireframe Gallery)
Product Details and Checkout Page



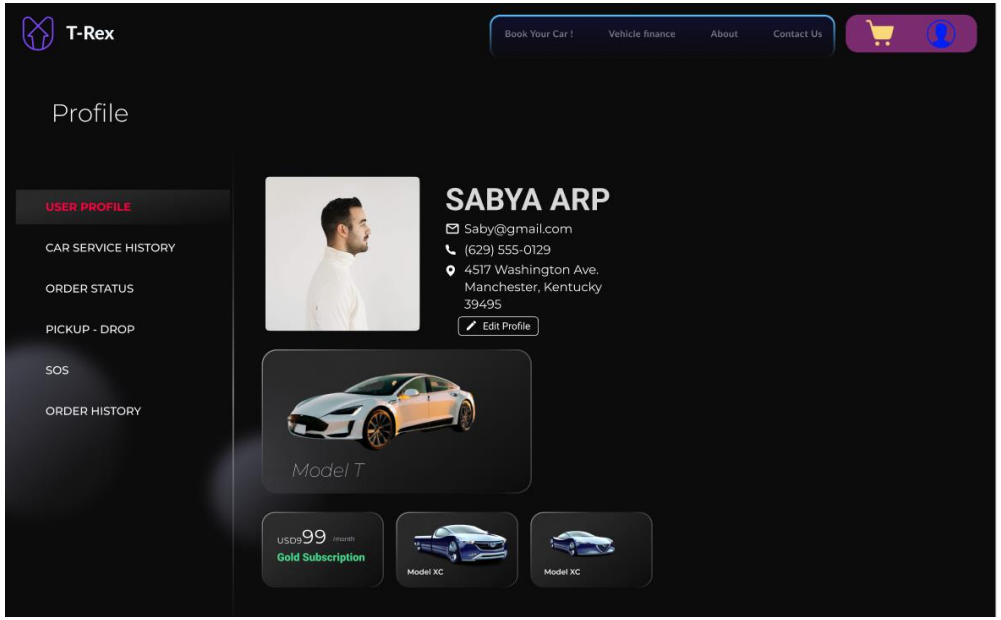


Appendix 1.d (Wireframe Gallery)
Easy Sign-up/ Sign-in page



Easy sign-up/sign-in through email/phone

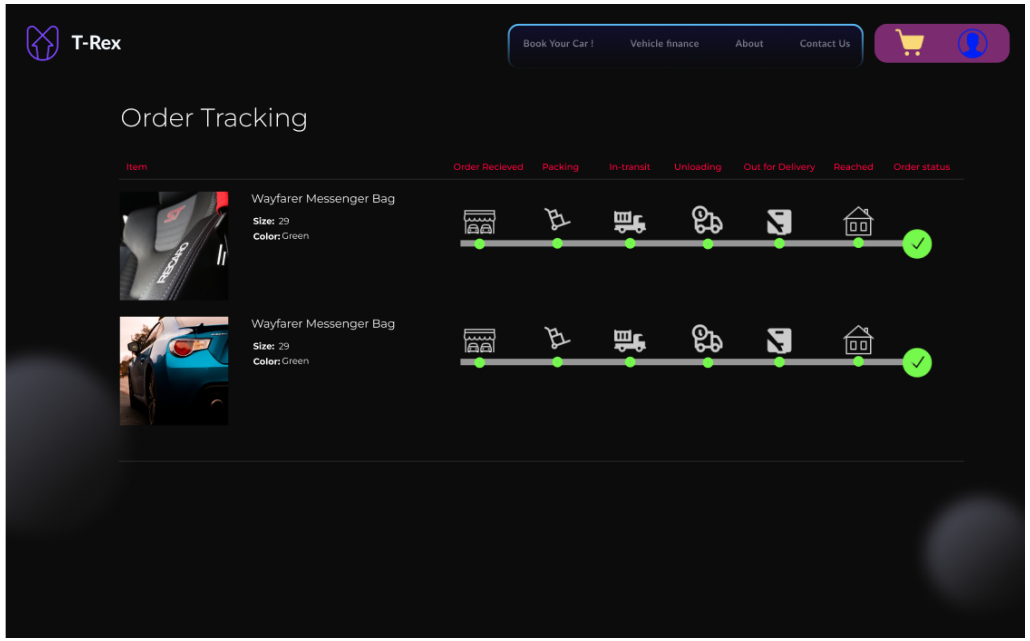
Appendix 1.e (Wireframe Gallery)
Profile and Order Tracking page



Part 1/2

- User can view their own profile
- Check other personal details from this page
- Access options for post-sales services like insurance, registration and other documentation
- OCR software can be introduced to read data from physical copies of documents

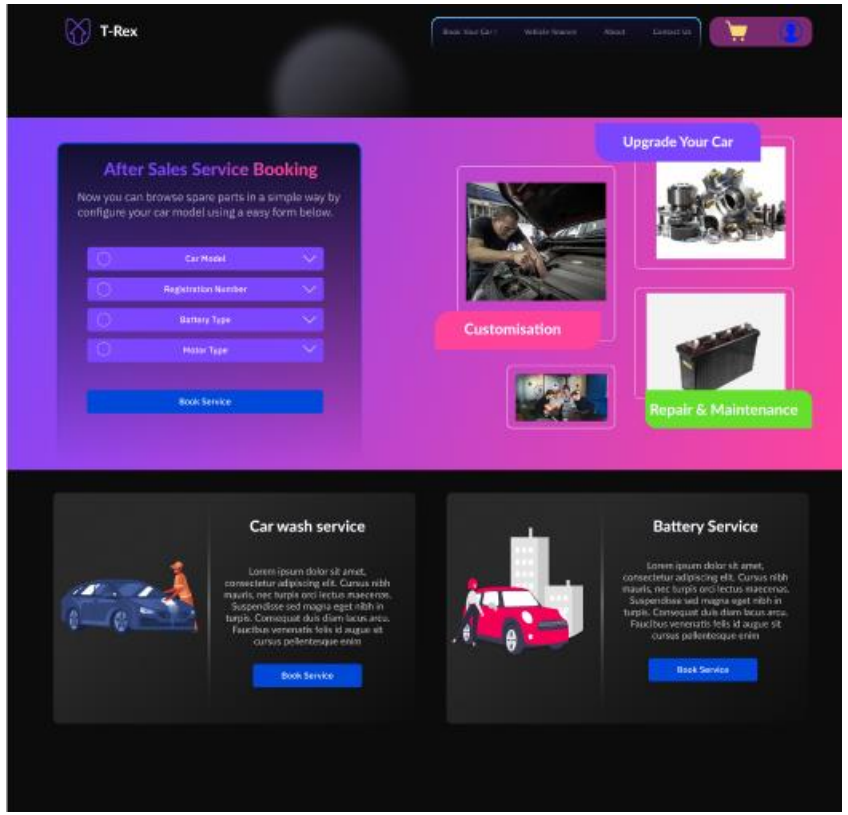
Part 2/2

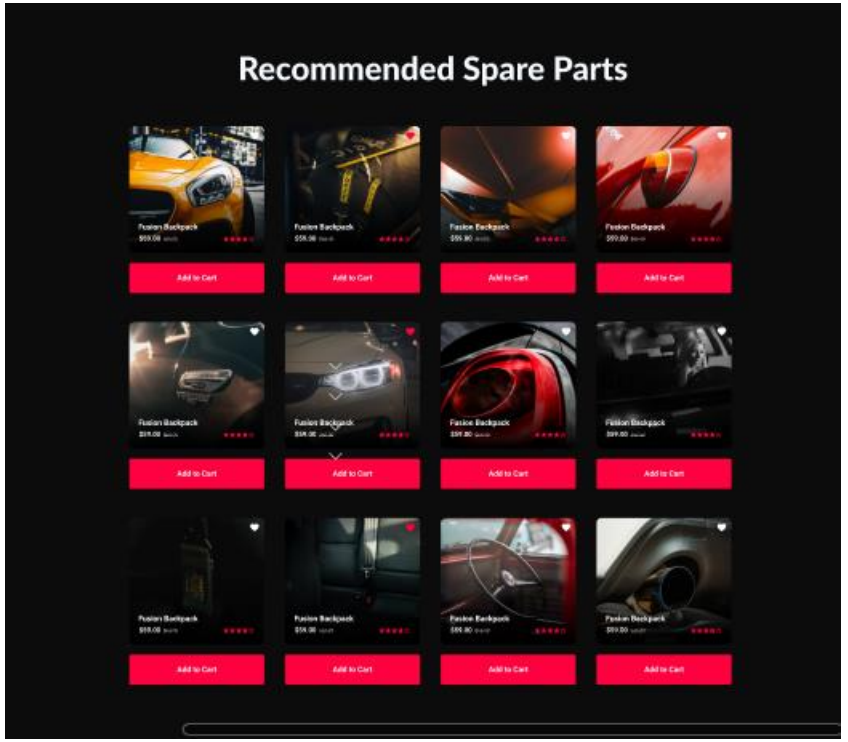


- Track current delivery status of order
- Get details like expected Date of Delivery of vehicle
- Updates automatically depending on the availability and installation times of the accessories chosen

Appendix 1.f (Wireframe Gallery)
Post-Sales Services

Part 1/2



- Provides options to buy accessories after successful completion of sale
- Book Maintenance/ Service visits in showroom directly from website/app

Part 2/2