

**HASAN ÖREN**  
**CANER KARACA**

**THE REPORT OF DELIVERY APPLICATIONS AND SOLUTIONS:**  
**Volunteer Internship Report**

**UTAD – Universidade de Trás-os-Montes e Alto Douro**

**Vila Real, Portugal**

**July, 2023**

**ABSTRACT**

This paper firstly provides a history about delivery applications and research on which currently available on application stores. Besides it gives you some solutions about how to design this kind of applications and which feature is feasible to use with some more extensions.

**KEYWORDS:**

Motorcycle, delivery, pick-up, maintenance, gps, navigation, logistics, mobile app, design, tracking, market research, mobility

## INTRODUCTION

The history of delivery apps can be traced back to the emergence of the on-demand economy and the increasing popularity of smartphones. With the advent of technology and the rise of e-commerce, there was a growing demand for faster and more convenient delivery services. This led to the emergence of the on-demand economy, where customers could request and receive various services at their convenience. The origins of the online food industry go back to 1994 where the first online food order received was a pizza from Pizza Hut in 1994. And the first online food ordering service, was Worldwide Waiter (now known as Waiter.com), was founded in 1995 (SELVAN, ANDREW, 2021).

Delivery apps revolutionized the way people order and receive goods and services. Their primary purpose is to provide convenience by allowing customers to browse through a variety of products or services, place an order, and have it delivered to their preferred location. Initially, delivery apps focused on food delivery from restaurants.

Delivery apps strive to offer a user-friendly experience by providing intuitive interfaces, detailed menus or catalogs, secure payment options, and real-time tracking of orders. They aim to streamline the ordering process, reduce waiting times, and enhance customer satisfaction enhancing the user experience. Delivery apps collaborate with local businesses, such as restaurants and stores, to expand their reach and offer a wide selection of products. These partnerships create a win-win situation by boosting the visibility and revenue of participating businesses while providing customers with a broader range of options.

Delivery apps have also created new job opportunities, such as food delivery drivers or couriers. While global installs of food delivery are slightly down, sessions are impressively up. In 2021, global sessions of food delivery apps increased by 58% YoY, and have added another 3% on top of this in 2022. This suggests that food delivery apps have been able to retain and engage users they acquired during the pandemic's peak. Additionally, global sessions have seen tremendous growth in 2022 compared to 2019, posting a massive increase of 212% (SHRESTHA, 2022).

Our research and solutions based on this history. Firstly, we have researched the delivery applications that already exist through what features they use, analogy of the features, how they are designed, what we can apply our solution according to this research. Subsequently, we designed our solution application which is a basic application and easy to use. Also you can change or add some extensions on this application. In the end we have explained our solutions and discussed about it.

## RELATED WORKS

### 1. GLOVO

Glovo, a prominent on-demand delivery application, has successfully established its presence in numerous cities worldwide, facilitating the seamless delivery of a diverse array of products to users' doorsteps. This versatile platform extends its services to encompass groceries, restaurant meals, pharmacy necessities, flowers, electronics, and much more. Utilizing the Glovo app is a straightforward process: users can effortlessly peruse various categories, select their desired items, and then rely on nearby Glovo couriers to handle the delivery. Real-time tracking and estimated arrival updates enhance the user experience, emphasizing the company's commitment to providing quick and convenient delivery services.

Glovo's core mission centers around expeditious order fulfillment and punctual deliveries, driven by an expansive network of couriers. The application also offers value-added features like live chat support and order customization options to cater to specific preferences. Beyond catering to food and retail requirements, Glovo has thoughtfully partnered with local businesses to extend its reach into various services such as laundry pickup, document delivery, and even pet care. This diversification ensures that users have access to an extensive range of products and services, all from the comfort of their own homes. Glovo's growing popularity is attributed to its user-friendly interface, rapid delivery times, and comprehensive service offerings, positioning it as the preferred choice for on-demand deliveries in today's fast-paced world.

In a world where convenience is paramount, Glovo has emerged as the go-to app for swift, reliable, and versatile on-demand deliveries, be it for groceries, restaurant favorites, or last-minute gifts, solidifying its place as a trusted partner for users seeking hassle-free delivery solutions in 2023 (GLOVO, 2023).

Image 1: You can go to pick-up point that you get from a service



Image 2: You can show and change your profile settings.

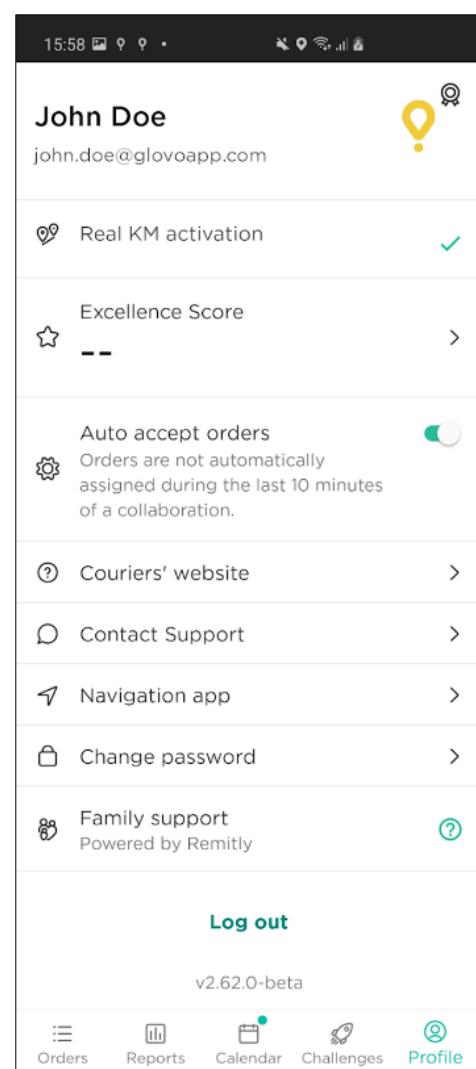


Image 3: You can see the order list.

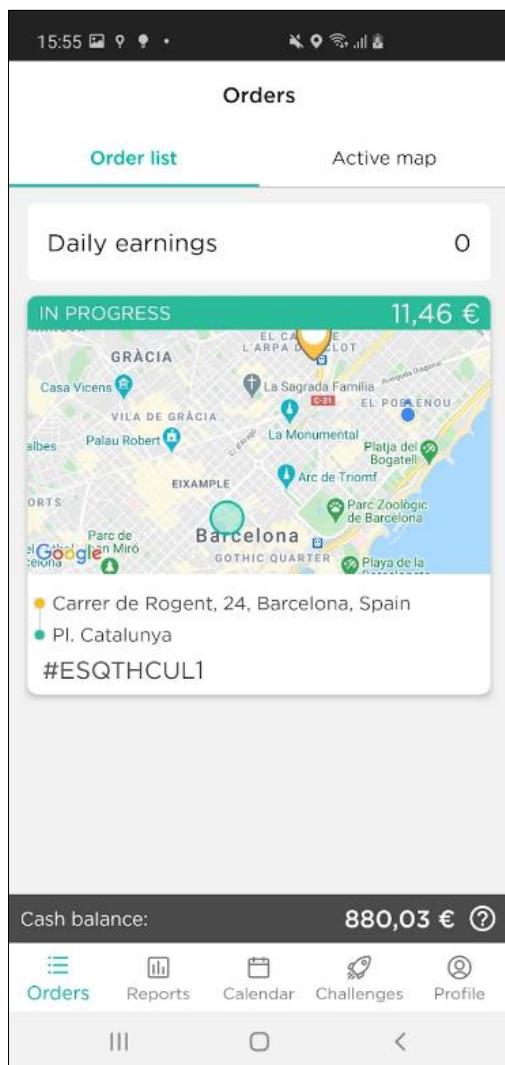
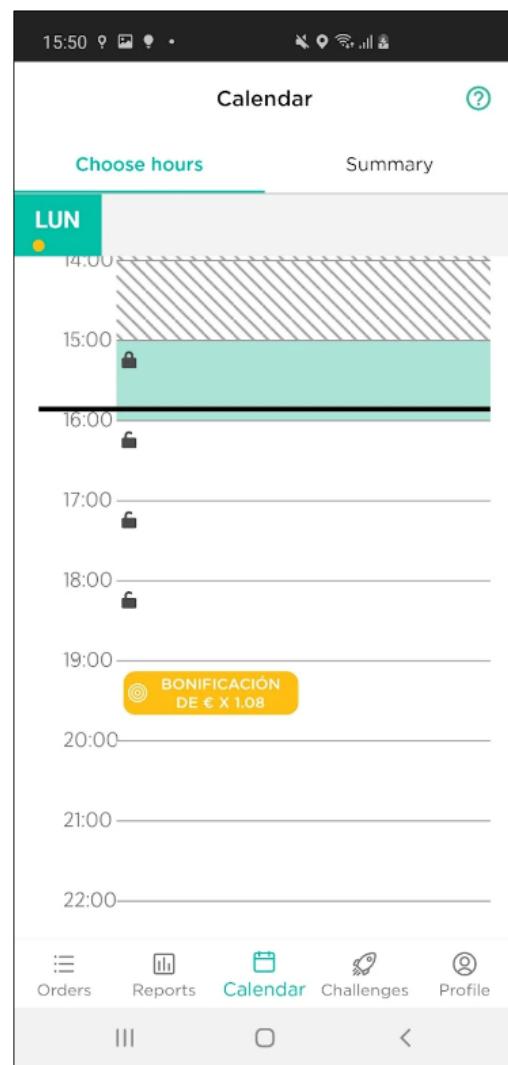


Image 4: Manage your work hours.



## 2. EAT SLEEP RIDE

The Eat Sleep Ride app is a game-changer for motorcycle enthusiasts, offering a comprehensive solution for discovering and tracking thrilling motorcycle routes worldwide. It enhances the riding experience, promotes safety with crash detection, and fosters a strong community of riders. The app also enables riders to set their own pace, explore solo or with like-minded riders, and engage in rewarding challenges for added excitement. It's a must-have tool for those looking to elevate their motorcycle adventures (EAT SLEEP RIDE, 2023).

Image 1: You can see what other users post.

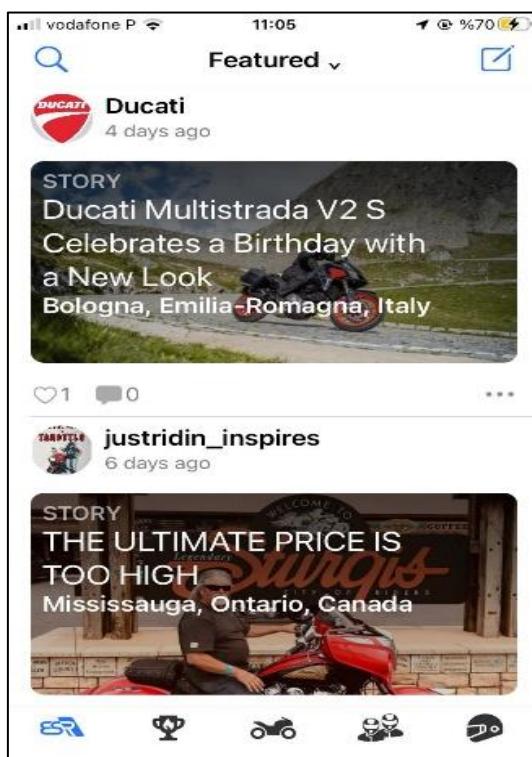


Image 2: You can see the available challenges that you can join with your friends.

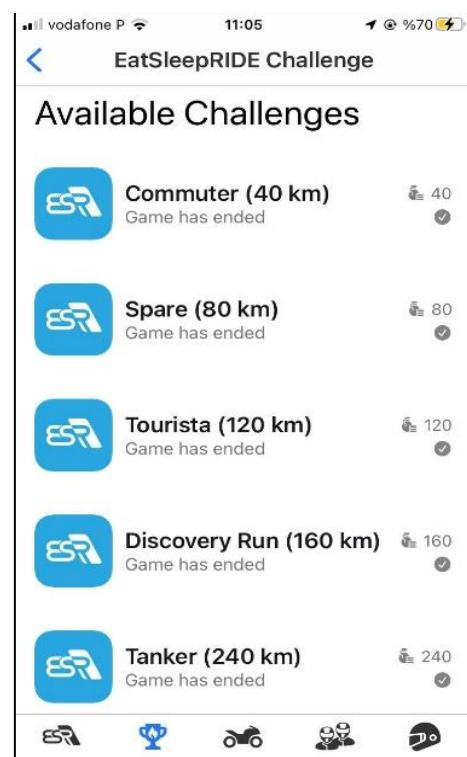


Image 3: You can create a group ride with your friends.

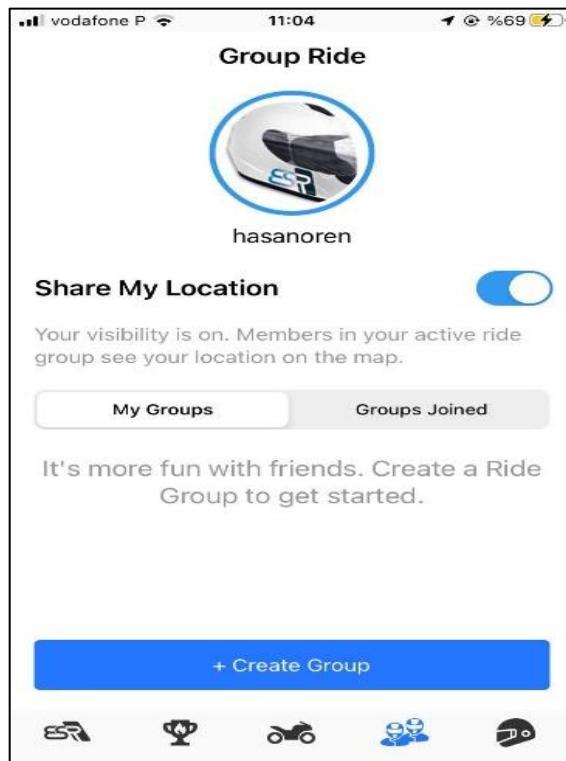


Image 4: You can create a group ride with your friends.

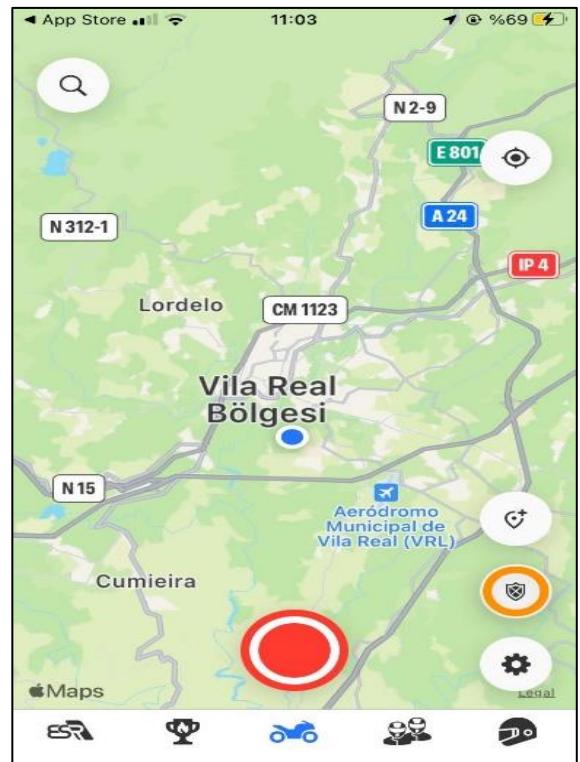
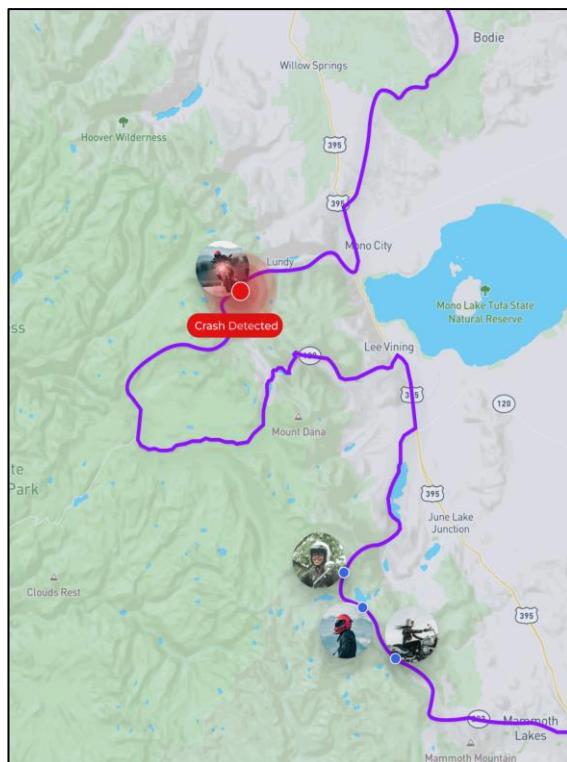


Image 3: Navigate the routes



### 3. REVER

The Rever app is a valuable tool for motorcycle enthusiasts, offering over 3,000 motorcycle road trip maps worldwide, accurate ride tracking, and offline functionality. It helps riders discover new routes and destinations, track their rides, and connect with fellow riders through social features and challenges. Rever is the go-to app for planning and tracking epic motorcycle adventures (REVER, 2023).

Image 1: Profile Settings

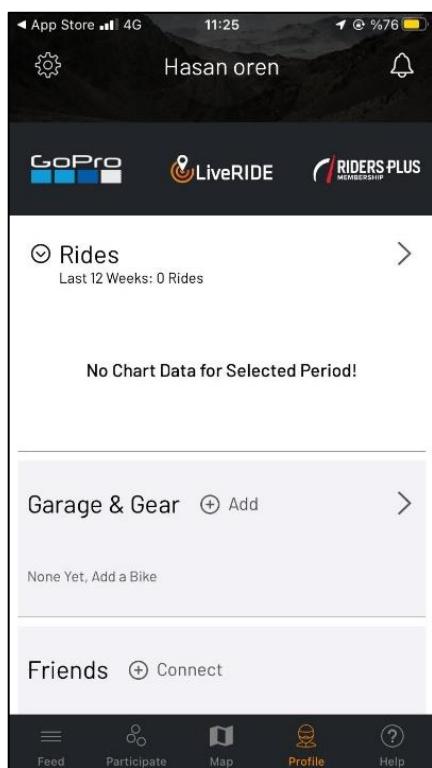


Image 2: Record Your Trip

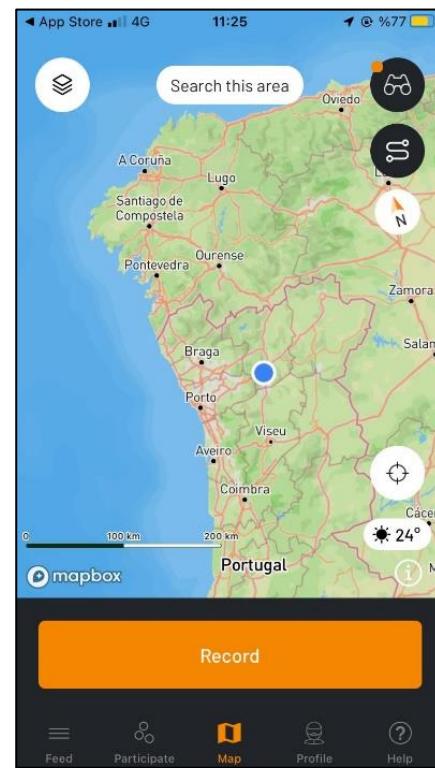


Image 3: Use recommended routes

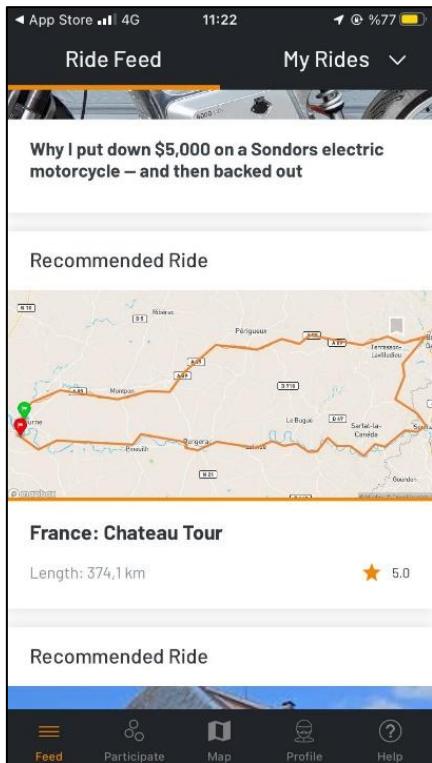
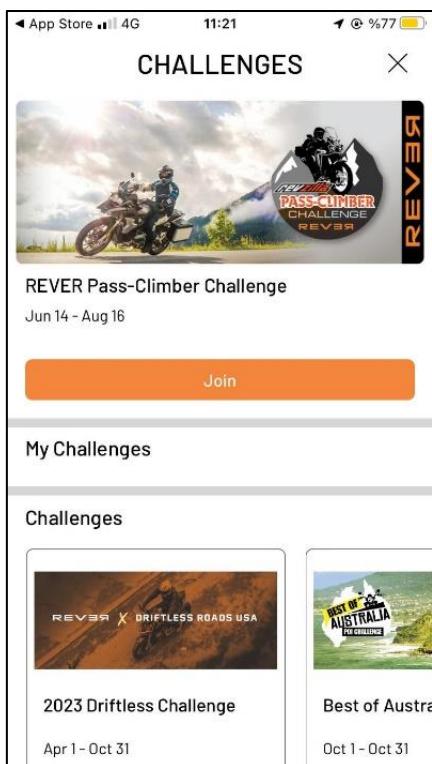


Image 4: See the routes in details



Image 5: Attempt challenges



## 4. MO.RIDE

The Mo.Ride app is an essential tool for motorcycle enthusiasts, available for download on both the Apple App Store and Google Play Store. It simplifies bike management with features like ride recording, a customizable dashboard, and maintenance reminders. The app's GPS Tourlog accurately tracks your rides, while the Last Trip feature provides trip summaries and statistics. Mo.Ride also offers a logbook for documenting your bike's history and a maintenance feature to keep you on top of servicing tasks. Additionally, the Season Stats feature lets you compare your riding achievements with the Mo.Ride community, adding a sense of friendly competition to your biking experience. Download Mo.Ride to enhance your biking adventures and stay organized, informed, and ready for every ride (MO.RIDE, 2023).

Image 1: See your last trip with statistics



Image 2: See your trip logs

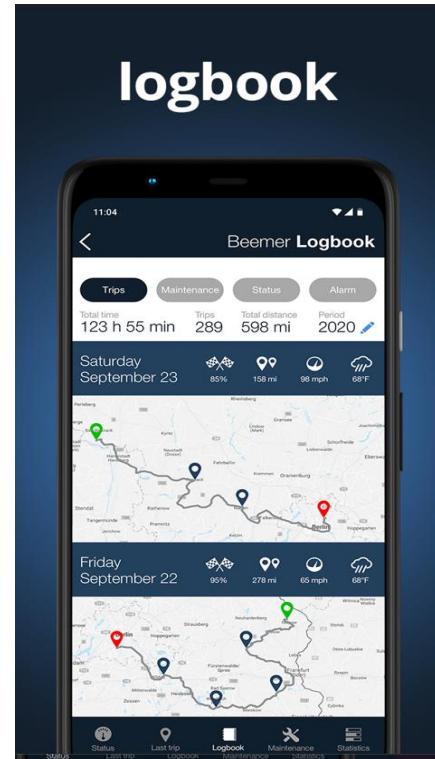


Image 3: Follow your maintenance

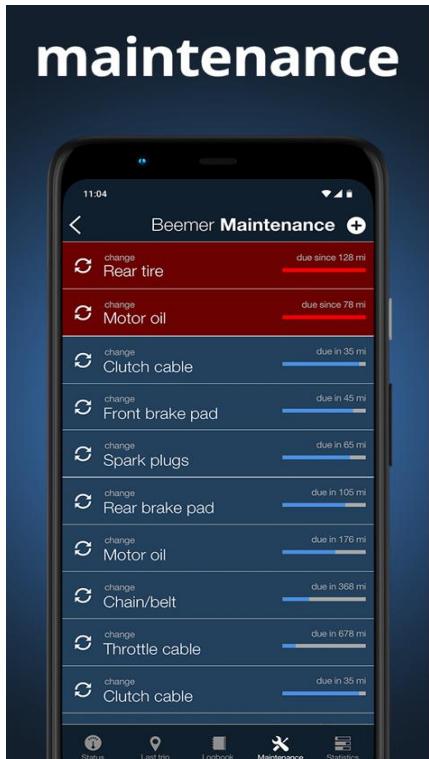


Image 4: See your general statistics



## 5. Diablo Super Biker

The Diablo Super Biker app is a game-changer for motorcycle enthusiasts, offering a powerful tool to elevate their riding experience. This mobile application allows riders to track, save, and analyze their performance on both the road and the track in real-time. It provides valuable insights into speed, times, duration, lean angle, acceleration, and weather conditions. The app also offers a personalized garage feature, records comprehensive ride statistics, stores a history of recordings, and provides access to maps of popular circuits worldwide. This comprehensive tool empowers riders to continually refine their skills, set goals, and enhance their riding capabilities, making it an essential companion for those looking to maximize their performance potential. Download the Diablo Super Biker app and embrace the thrill of the ride while unleashing your full riding potential (DIABLO SUPER BIKE, 2023).

Image 1: Home Page

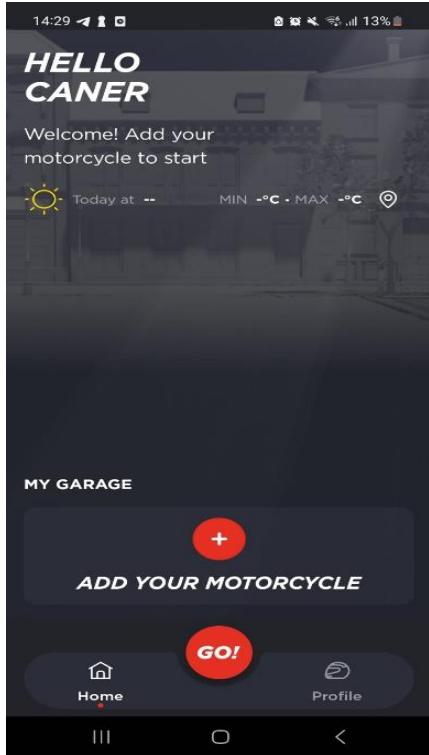


Image 2: Add Motorcycle

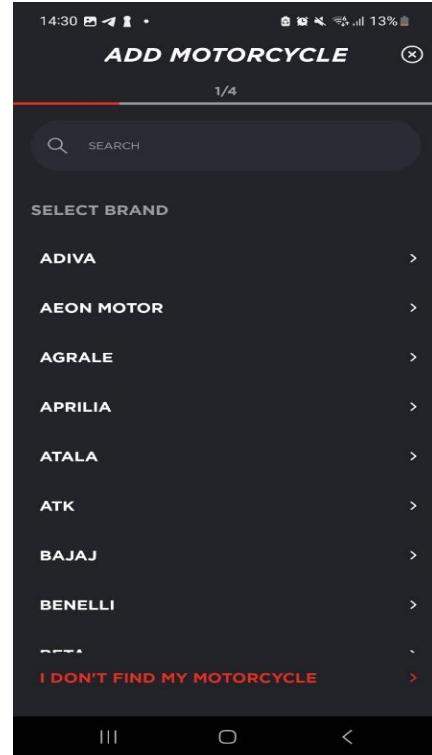


Image 3: Record Route

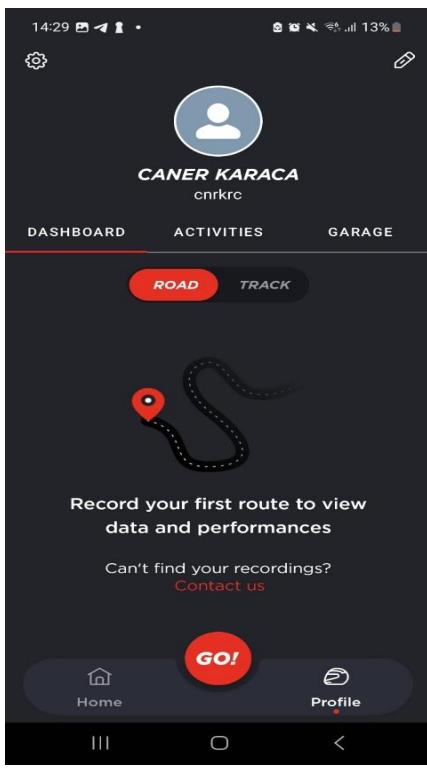
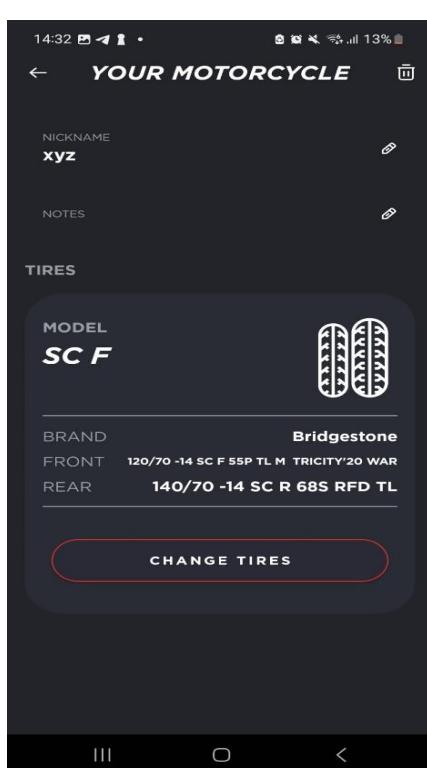


Image 4: Motorcycle Properties



## 6. Harley-Davidson

Plan, navigate and connect with a network of dealers and riders using the official app from Harley-Davidson®. With the community service make new connections, create or join groups, and find events in your local area or at your next destination and by creating a membership create a custom profile, track your points, and connect with your local dealership. Earn points with purchases and in-app activities.

Plan a custom route on the map by adding waypoints, Harley-Davidson® dealers, gas stations and restaurants along the way. Your custom routes are synced with the routes you create on [www.h-d.com/rideplanner](http://www.h-d.com/rideplanner). Record and share your rides with friends. From custom planned routes or favorite local rides to that epic ride you just recorded. Stay on course with turn-by-turn GPS navigation. Choose a destination or plan an epic route.

Participate in riding challenges, climb the leaderboard, and earn achievements including reward points. Locate and navigate to any dealership using GPS navigation. Connect with dealers, see their services, hours and upcoming events. Manage your Harley-Davidson Motorcycles and ensure they are maintained and recall free. On select vehicles with Bluetooth connectivity you can display your routes on your bike's infotainment system (HARLEY DAVIDSON, 2023).

Image 1: Join the communities

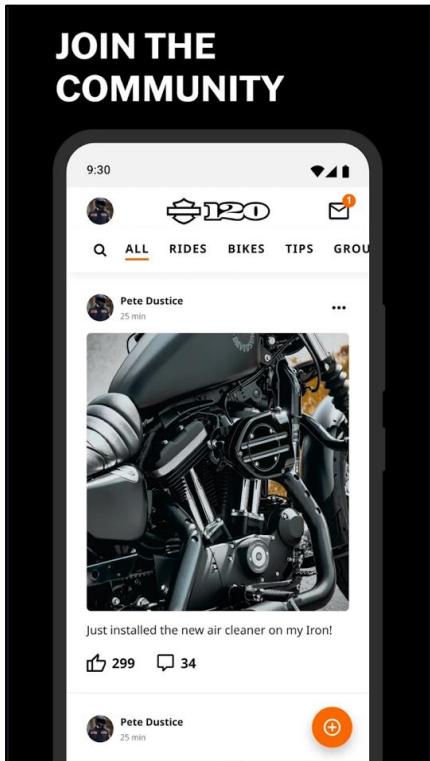


Image 2: Interact with people

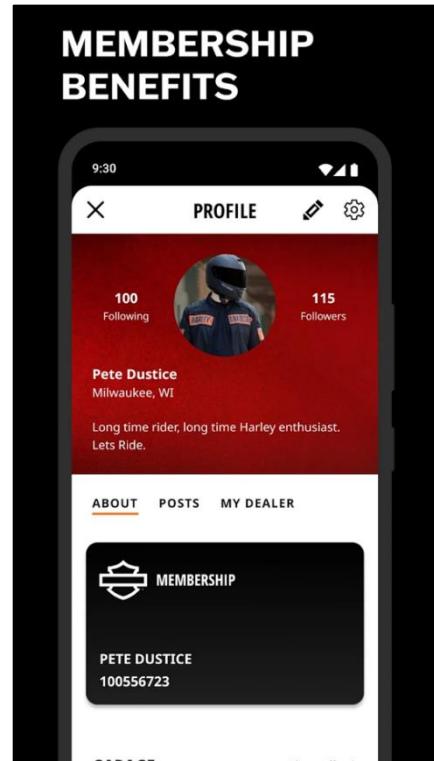


Image 3: Create custom rides

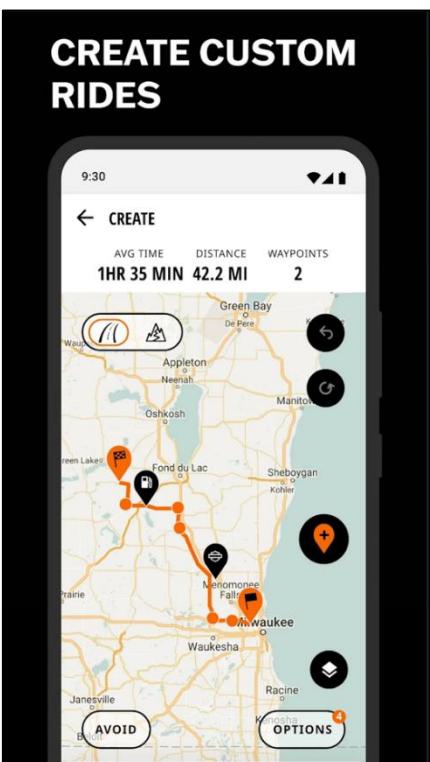


Image 4: Record your rides and stats

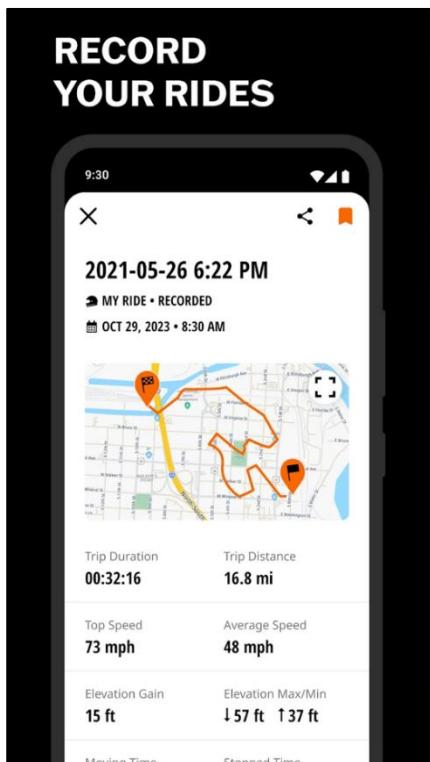


Image 5: Participate Challenges

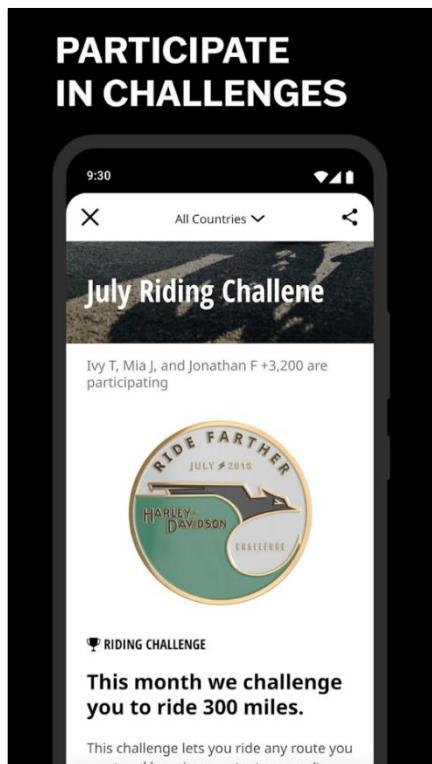
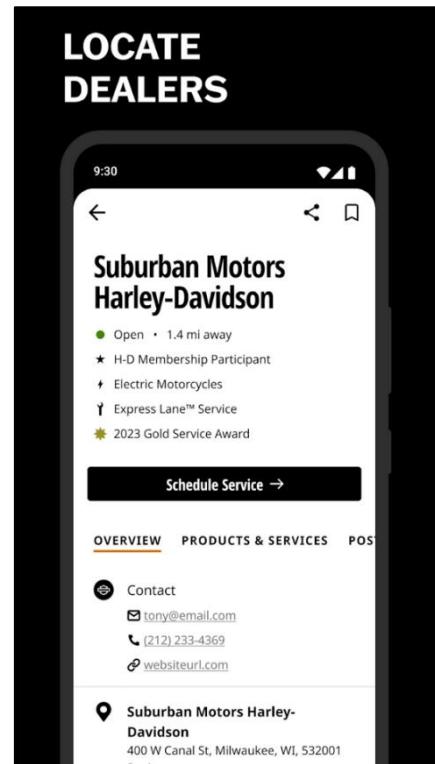


Image 6: Locate Dealers



## 7. Deliveroo

Deliveroo is a prominent food delivery app that has transformed the way we satisfy our cravings in today's fast-paced world. Operating in multiple countries, it connects customers with a wide range of restaurants, facilitating the effortless delivery of delicious meals to their doorstep. This blog post highlights key features of Deliveroo that enhance the food delivery experience.

One notable feature is the ability for delivery riders to access their weekly schedule, providing flexibility for balancing work with other commitments. Riders can easily go online, accept orders, and toggle their availability with seamless efficiency. The app also offers real-time earnings tracking, providing transparency and insights into financial performance. Additionally, Deliveroo prioritizes user support, with dedicated help and support features available for addressing questions and resolving issues.

Overall, Deliveroo has become a leading food delivery app, offering a user-friendly platform for customers to order from local restaurants. Its features, including schedule visibility, efficient order processing, earnings tracking, and accessible support, make it a convenient choice for both customers and delivery riders. Whether you're seeking a comforting meal or flexible part-time work, Deliveroo provides a solution that caters to your needs. Embrace the convenience and explore the world of food delivery with Deliveroo (DELIVEROO, 2023).

Image 1: See the orders

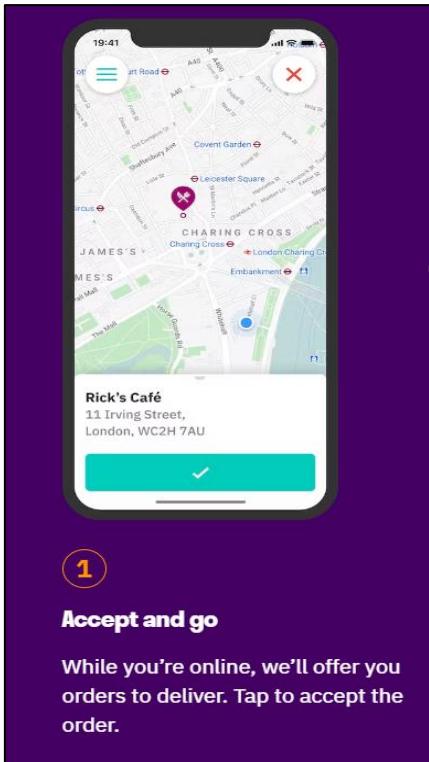


Image 2: Create route to get your order

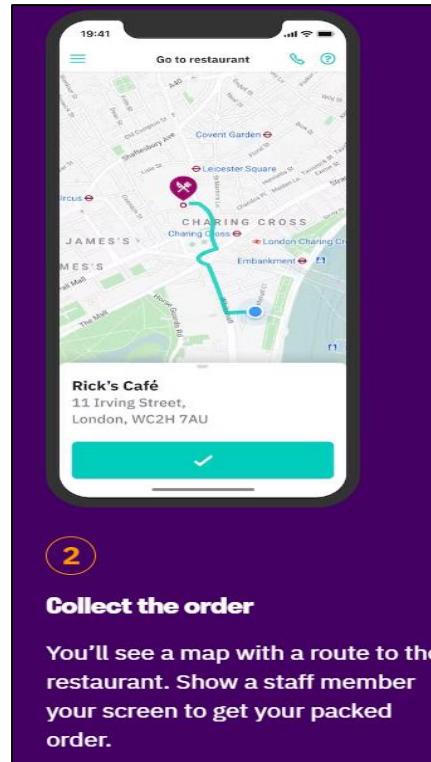
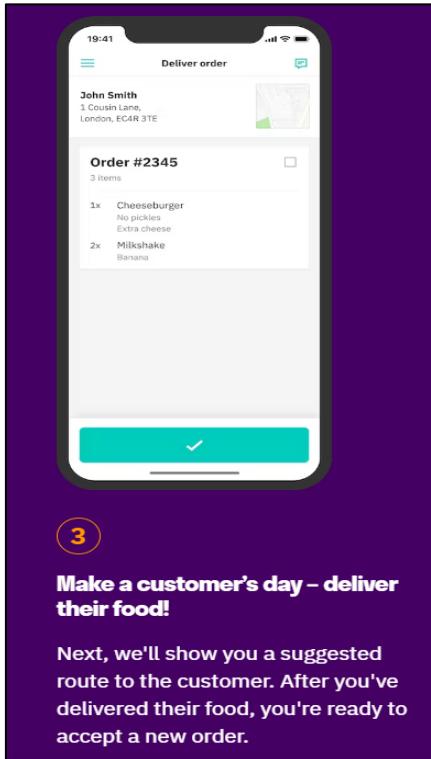


Image 3: Accept recommended order



## 8. Gotrack App

GoTrackApp is a real-time AI-based solution designed to streamline employee productivity, enhance customer service, and boost business efficiency in various industries, including pickup and delivery, beauty services, repairs, home services, health and well-being, and more. It's a mobile application that effectively manages business delivery and pickup services while providing real-time monitoring of daily tasks.

One of GoTrackApp's standout features is its Uber-like customer-to-driver tracking, allowing customers to track their deliveries in real-time. Customers receive notifications with tracking links, offering information on the driver's estimated time of arrival (ETA) and the ability to contact the driver directly. Additionally, the app provides digital proof of deliveries through features like digital signatures, photos, and notes, all stored in a centralized location.

This reduces missed deliveries and minimizes customer complaints by providing visibility into the driver's activities from pickup to drop-off. GoTrackApp also offers a dedicated restaurant driver app for iOS and Android, simplifying task management for drivers with push notifications, easy navigation, and proof of delivery features. (GO TRACK, 2023).

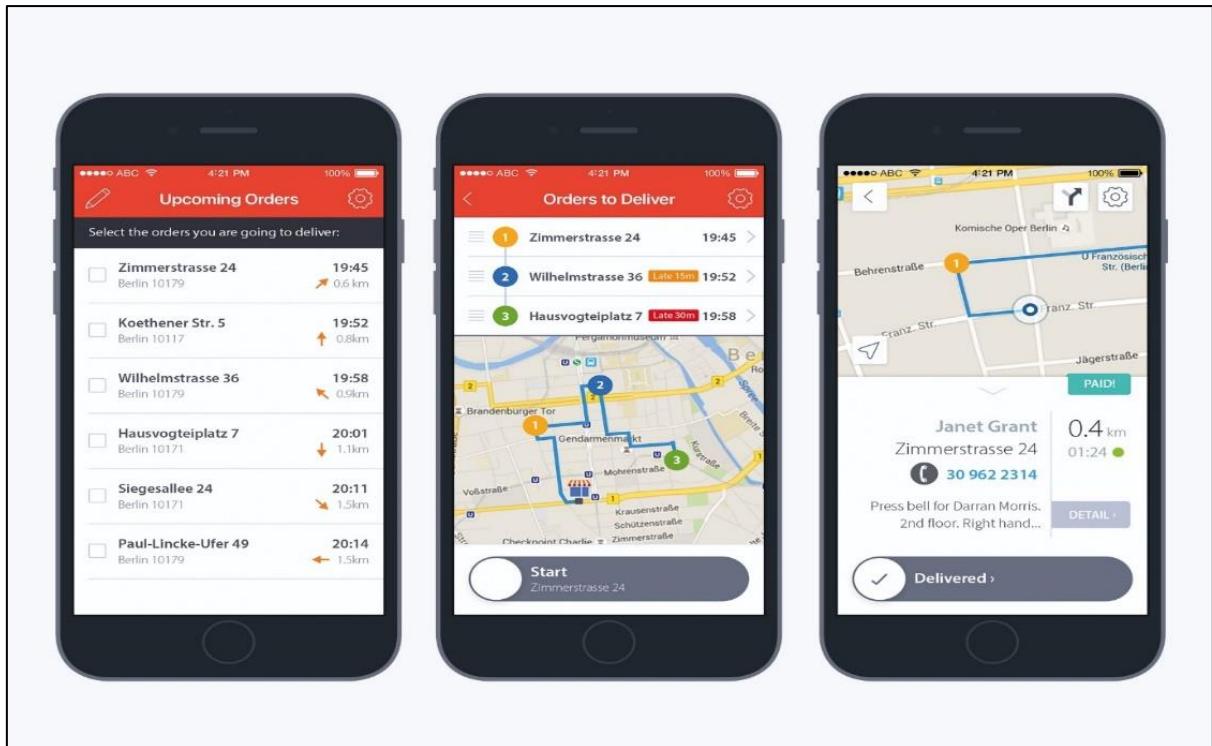


Image 1: In the first screen you can view the orders to do. In the second screen you can view the route to deliver. In the last screen you can view the customer informations and check it as delivered.

## 9. PICKUP: Pro

PICKUP: Pro is an innovative delivery service app that empowers individuals to establish their own delivery business using their personal pickup truck, van, box truck, or muscle vehicle to transport items from well-known retailers. The app offers the flexibility of crafting a customized work schedule, granting users the freedom to work whenever and however much they desire. As a PICKUP Pro, individuals can enjoy the independence of being their own boss while leveraging their existing resources to provide valuable delivery services for retailers like Big Lots!, Buy Buy Baby, Behr Paint, and more, all while earning additional income.

With PICKUP: Pro, users can expect transparent and prompt payments, as each job offer lists the payout in advance. On average, PICKUP Pros earn approximately \$45 per job and retain 100% of their tips, ensuring a dependable source of income. Beyond financial rewards, this unique opportunity also brings the satisfaction of aiding the community through timely deliveries. Becoming a PICKUP Pro offers an exceptional and fulfilling way to earn income, enabling individuals to work on their own terms, become their own boss, and utilize their own vehicle for deliveries. Joining PICKUP: Pro unlocks the benefits of being an independent delivery professional and the opportunity to enjoy the freedom it offers. (PICK UP PRO, 2023)

Image1: Login Page



Image 2: Search for work

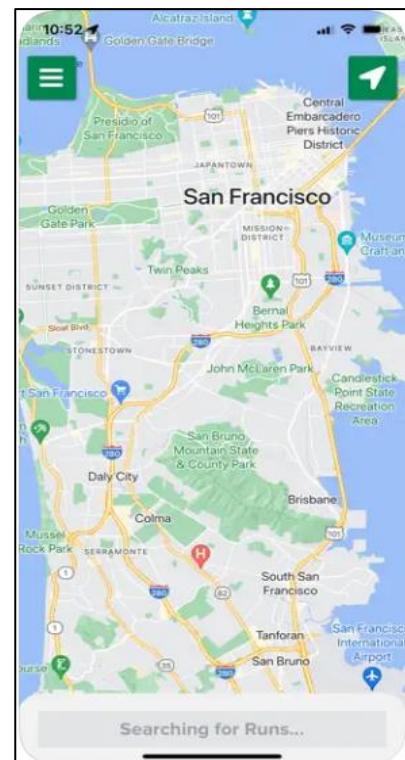


Image 3: Job Board

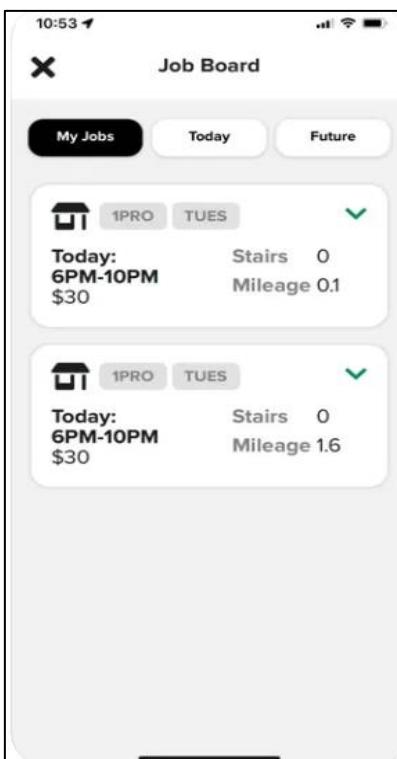
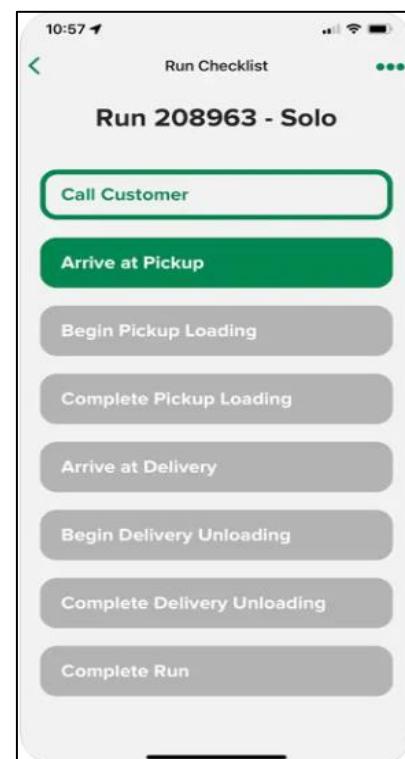


Image 4: Work Checklist



## 10. Track-POD Delivery Driver App

Track-POD is an advanced electronic Proof of Delivery (ePOD) app designed to streamline delivery management in today's fast-paced business environment. It offers real-time tracking, route planning, and instant notifications to optimize delivery processes and elevate customer service. The Track-POD system consists of a delivery driver app and a cloud-based dashboard, providing a comprehensive solution for businesses.

With the Track-POD driver app, field staff, drivers, and carriers can access assigned routes on their smartphones. The app offers detailed information on sites to visit, expected delivery times, and order/job specifics, ensuring drivers have all necessary data at their fingertips. Communication between drivers and supervisors is facilitated through the app, allowing calls and navigation to destinations. It also supports multiple deliveries and loading at the same location for efficient pickup and drop-off scenarios.

Track-POD ensures complete visibility into delivery status with its real-time notification system, enabling automatic updates on delivery issues, photo capture, document syncing, and easy tracking. The app simplifies data collection during deliveries, including cash-on-delivery (COD) amounts, quantities, comments, and recipient eSignatures. It also supports workflow management for shipment, loading processes, and the handling of returnable containers and equipment. Track-POD works seamlessly online and offline, automatically resubmitting data when a connection is restored. By integrating Track-POD into delivery operations, businesses can optimize routes, enhance communication, and improve customer satisfaction, all while eliminating manual paperwork and inefficiencies (TRACK POD, 2023).

Image1: Offered Routes

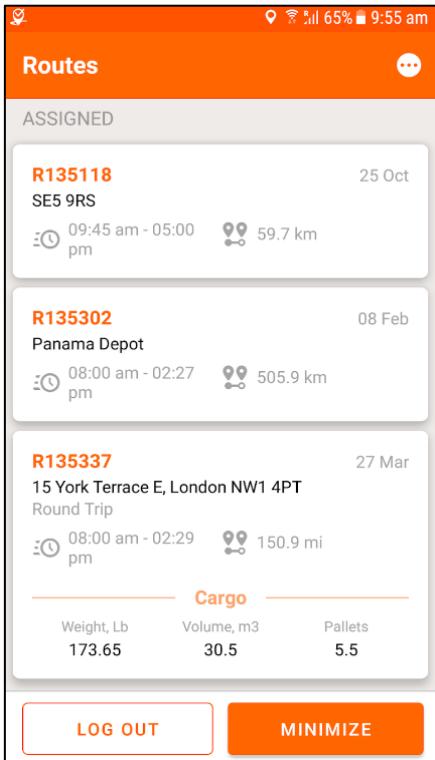


Image 2: Routes in details

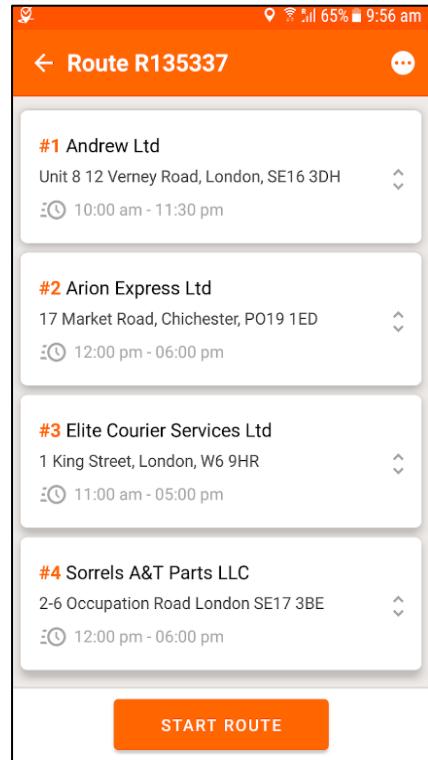


Image3: See Orders

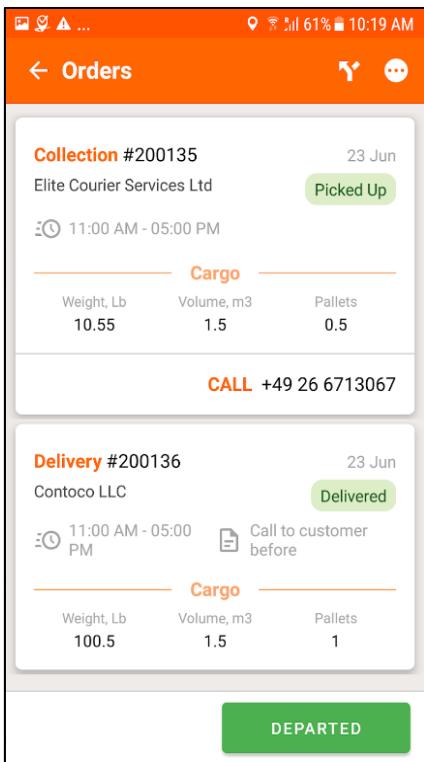


Image 4: Orders in details

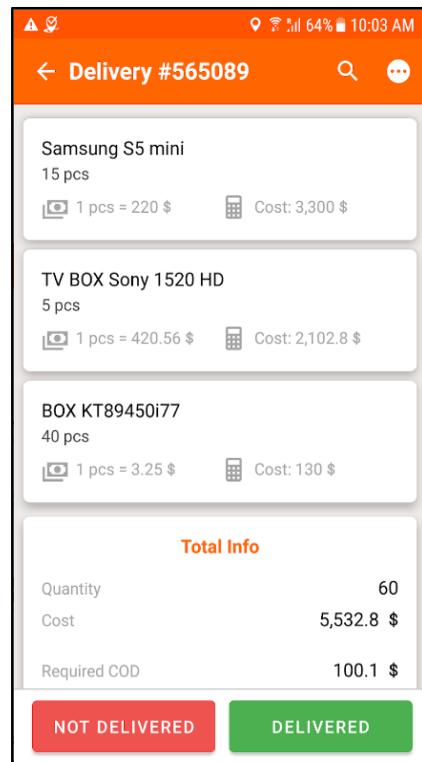


Image 5: Proof of delivery

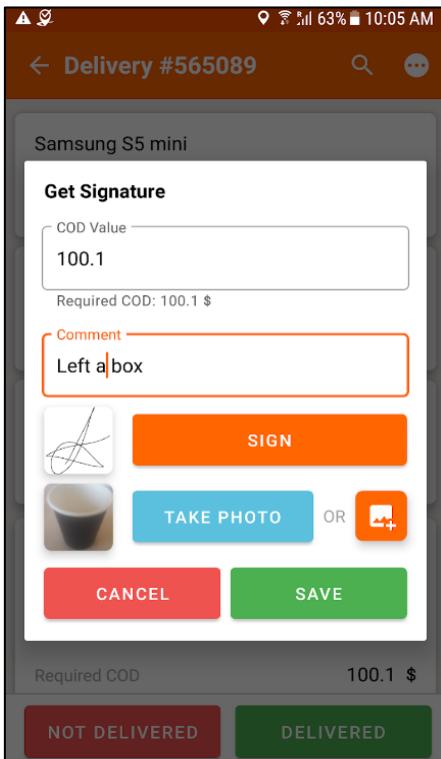
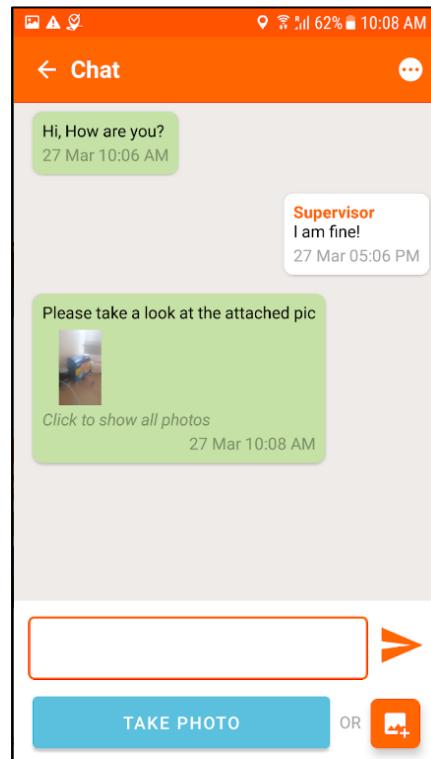


Image 6: Chat with customers



## 11. OptimoRoute Driver

The OptimoRoute Driver App is a powerful tool designed to enhance route planning and delivery management for businesses in the fast-paced delivery and field service sectors. This app connects with the OptimoRoute system and provides drivers with all the essential resources they need in one place, including route maps, schedules, order information, and navigation assistance. It simplifies the proof of delivery process, allowing drivers to gather signatures, capture photos, and add notes, ensuring accurate documentation and transparency.

The app also facilitates seamless communication between drivers and dispatchers, providing real-time updates on delivery progress to the dispatching office. This feature enables dispatchers to stay informed, track delivery statuses, and make necessary adjustments in real-time, improving overall efficiency. The OptimoRoute Driver App offers a user-friendly interface that allows drivers to visualize their entire route and associated orders on one screen, helping them plan and prioritize their deliveries effectively. It has become an indispensable tool for drivers in the delivery and field service industries, streamlining operations, enhancing productivity, and promoting error reduction through its integration with the OptimoRoute system (OPTIMO ROUTE, 2023).

Image1: Get offered Works

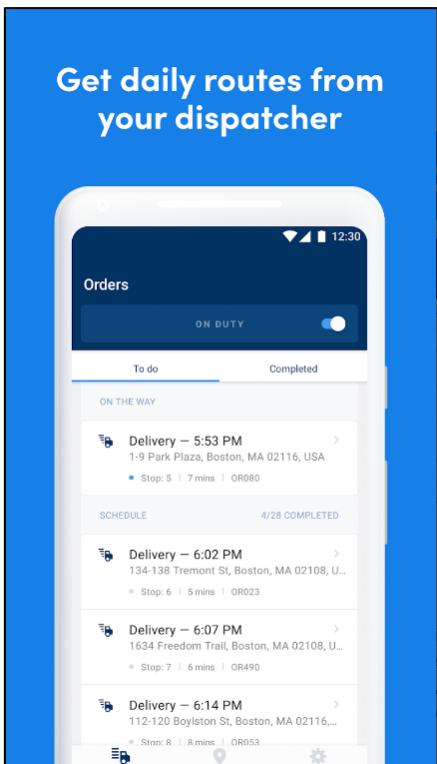


Image 2: View the work in details

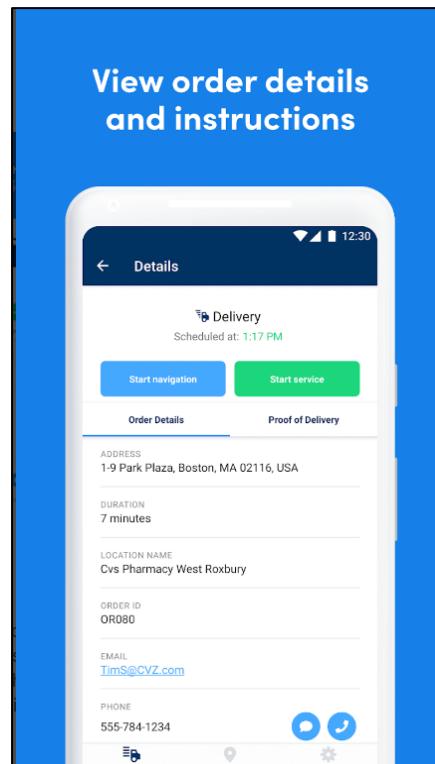


Image 3: View the works in the map

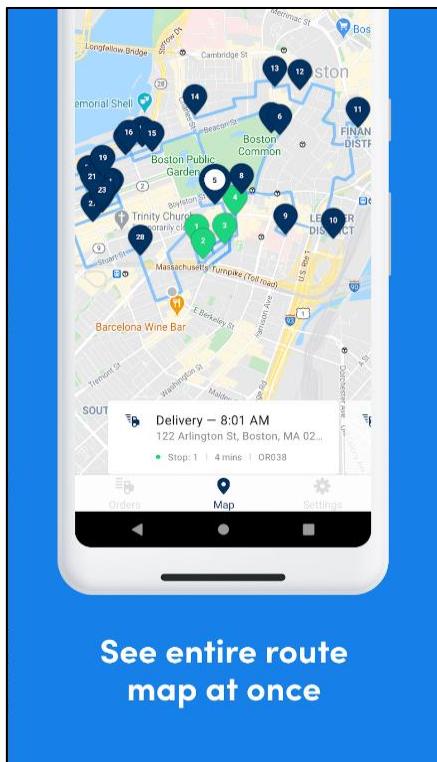


Image 4: Add proof of delivery

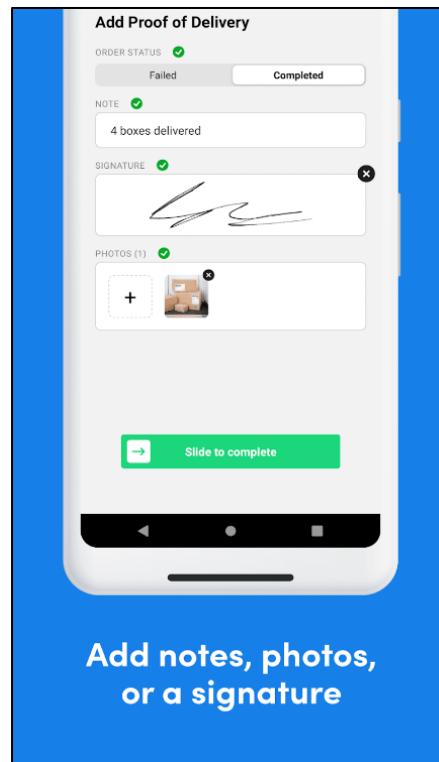
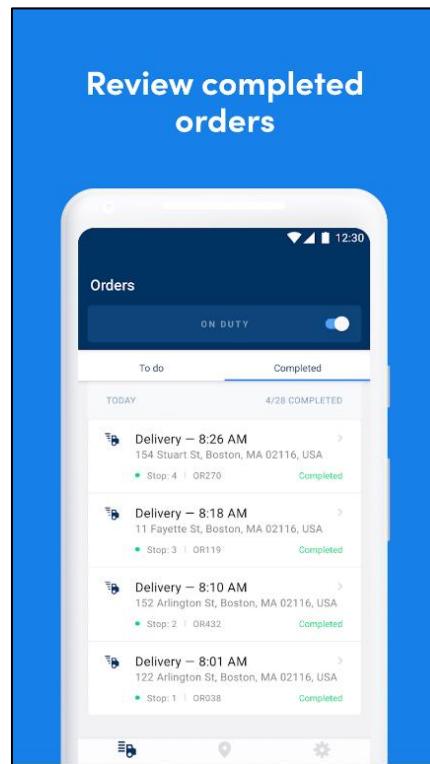


Image 5: Review Completed Orders



## 12. Droppath Route Planner

Droppath is a powerful solution for managing stops and optimizing routes, aimed at streamlining your day on the road and maximizing efficiency. The app offers easy stop management with quick access tabs for adding, organizing, and adjusting stops in either list view or map view, eliminating the need for paper-based tracking or relying on memory.

Droppath simplifies route planning by employing advanced algorithms that consider factors like distance, traffic conditions, and time constraints to determine the most efficient route for your stops. This ensures that you no longer waste time on inefficient routes, driving in circles, or guessing the best way to reach your destinations.

The app caters to various delivery operations, supporting routes with up to 200 destinations and offering a search bar for quick item location. Droppath also allows you to mark stops as "Success" or "Failed" as you complete them, providing a visual representation of your progress and helping you stay organized. This valuable tool empowers you to take control of your day on the road, simplifying delivery operations, and boosting efficiency and productivity (DROPPATH ROUTE, 2023).

Image 1: Choose stops in the route

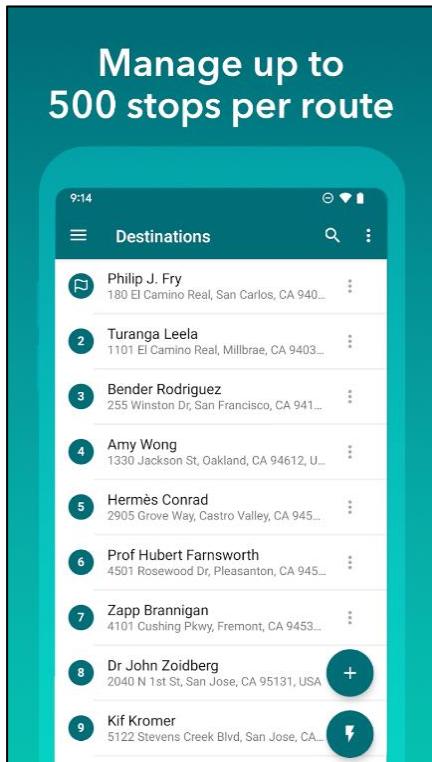


Image 2: Find the fastest route

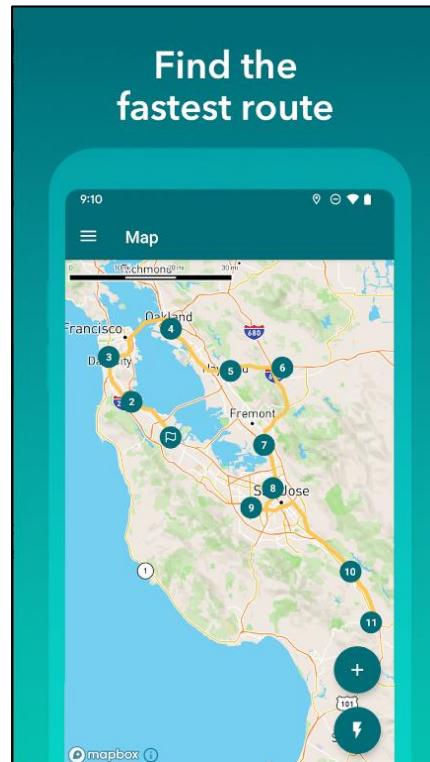


Image 3: Get directions by text

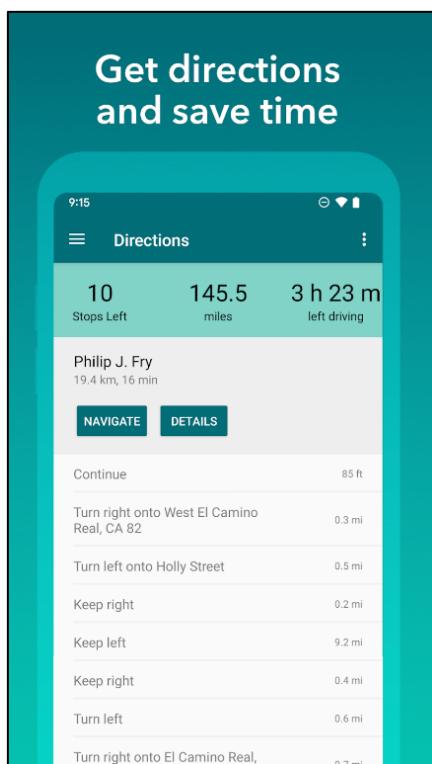


Image 4: Add new stops

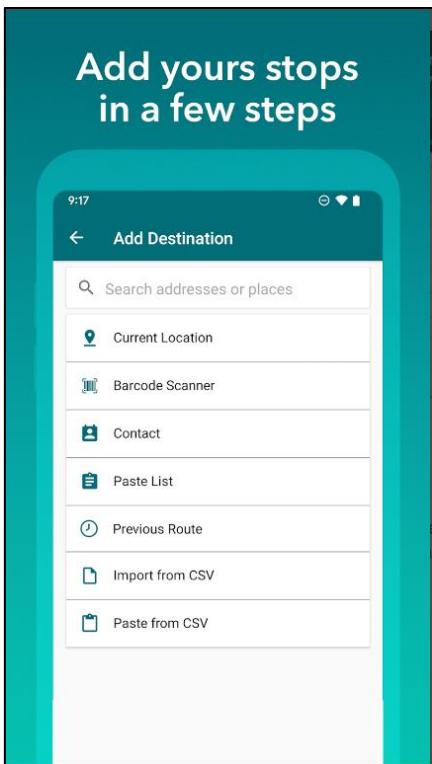
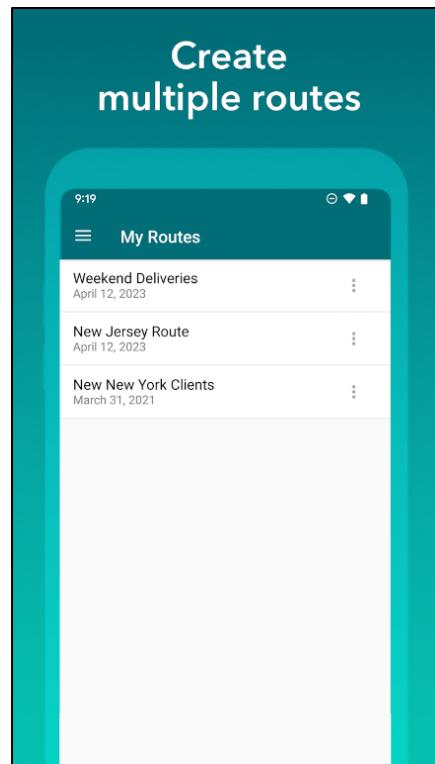


Image 5: Create multiple routes



## 13. Uber - Driver: Drive & Deliver

Uber provides a flexible way to earn money on your own terms, offering both driving and delivery opportunities. You have the freedom to choose your preferred mode of transportation, whether it's a bike or car, and you're in control of when, where, and how long you want to work, allowing you to tailor your earnings to fit your lifestyle.

The app offers exclusive features like the Earnings Estimator, which helps you plan a more strategic schedule by leveraging data insights to identify the busiest times for earning. Uber operates in over 10,000 cities, providing a wide-reaching platform that allows you to work from anywhere and access a vast customer base. The Instant Pay feature allows you to transfer your earnings up to 5 times a day, giving you the flexibility to cash out whenever you choose.

Additionally, Uber places a strong emphasis on safety with its Door-to-Door Safety Standard, ensuring the well-being of both riders and drivers. Uber offers a unique opportunity to earn money on your terms, plan your schedule, and work from anywhere, making it an appealing choice for those seeking flexibility in their income source (UBER DRIVER, 2023).

Image 1: Follow your balance

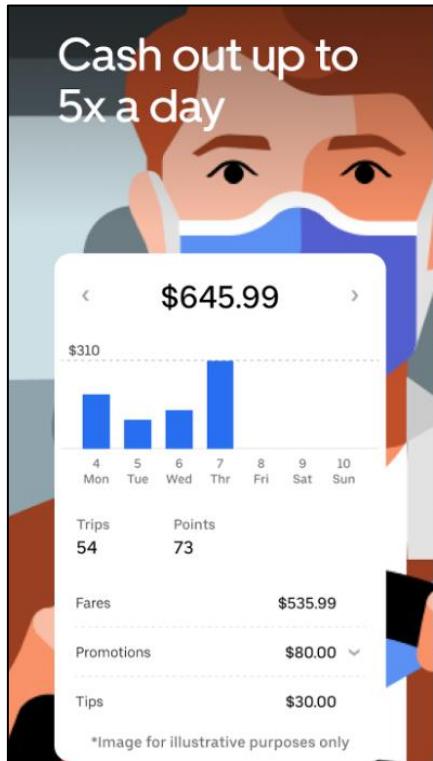


Image 2: Create Schedule for yourself

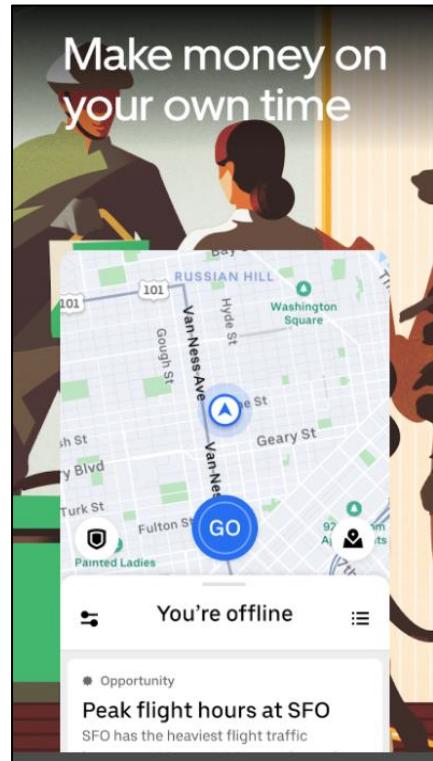


Image 4: Earn more in some places

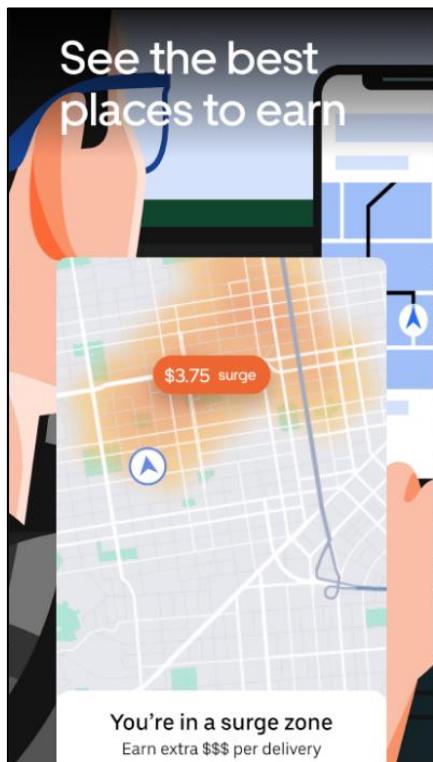
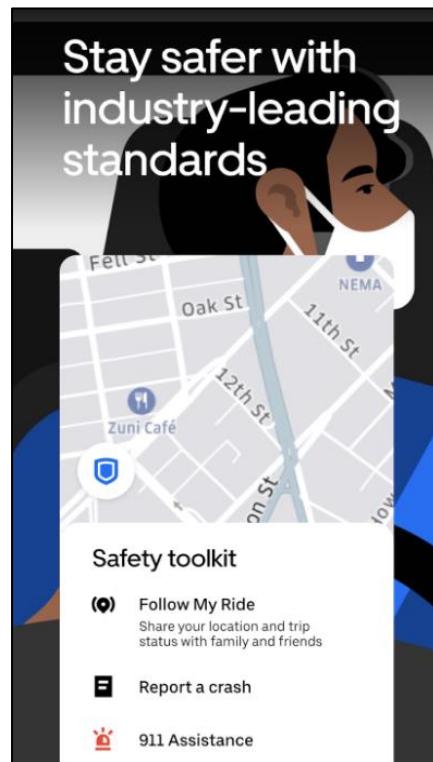


Image 5: Use safety toolkit



## 14. My Driver App

My Driver App is designed for delivery drivers and couriers handling local deliveries, offering a convenient solution to streamline their operations. The app enables real-time communication with dispatchers, providing drivers with the latest delivery assignments, delivery queue, pickup and delivery addresses, and order details. This eliminates manual paperwork and reduces errors, enhancing efficiency.

Efficient route planning is a key feature, offering drivers the fastest routes from pick-up to delivery, helping them navigate through traffic more efficiently and save time. The app also facilitates seamless communication, allowing drivers to update delivery status with a single tap and share real-time updates with dispatchers, customers, and other stakeholders.

My Driver App ensures drivers have comprehensive order details, including contact information, delivery instructions, and special requirements, enabling accurate and efficient deliveries. Additionally, drivers can capture proof of delivery, such as photos and signatures, enhancing transparency and accountability. Overall, the app empowers delivery drivers to provide exceptional service while staying organized and connected (MY DRIVER, 2023).

Image 1: View list of Orders

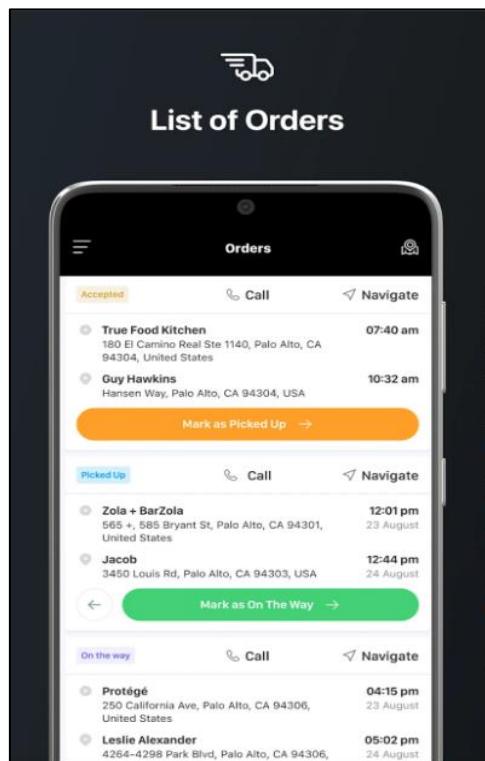


Image 2: View order details

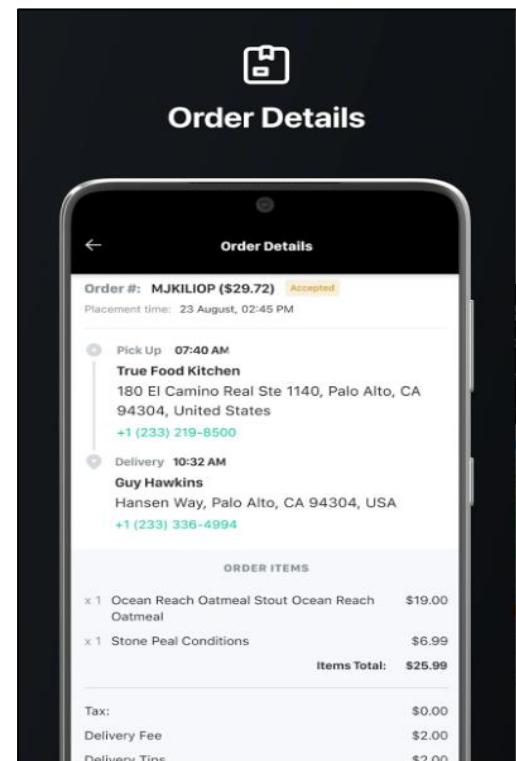
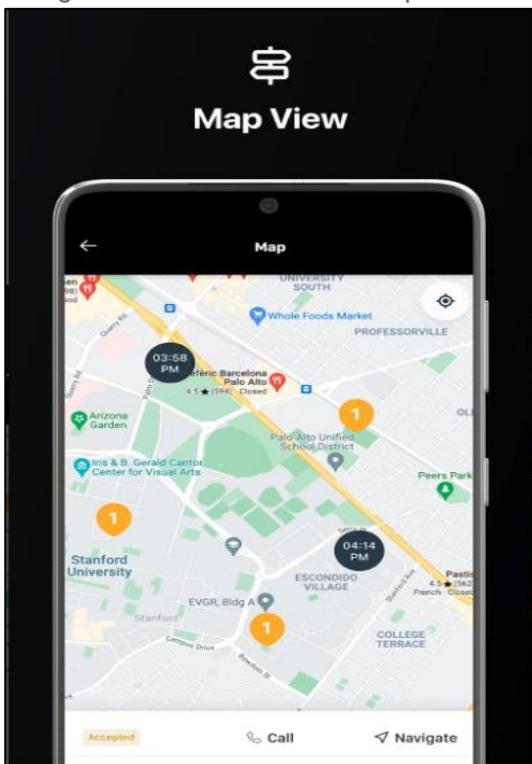


Image 3: View orders in the map

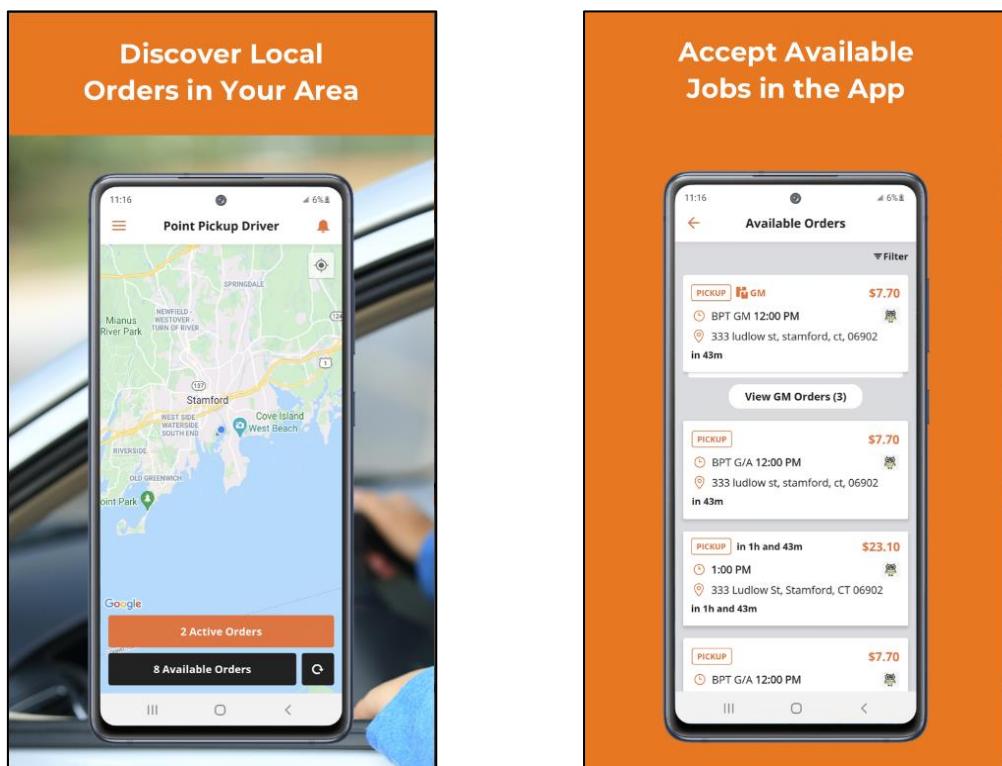


## 15. Point Pickup Driver

Point Pickup Driver is a delivery service app that offers gig workers the flexibility to earn money in their own neighborhood. The app stands out by allowing drivers to only drive when they have delivery orders, eliminating aimless driving and downtime. This approach maximizes time efficiency and convenience for drivers.

Furthermore, Point Pickup Driver offers the advantage of having your car to yourself, ensuring a more comfortable and stress-free experience compared to ride-hailing services. The app also enables drivers to plan ahead by accepting orders in advance, giving them greater control over their schedules and time management.

In addition, Point Pickup Driver simplifies pickups by offering a consistent pickup location, allowing drivers to make all pickups at the same store location. This streamlines the delivery process, making it more efficient and convenient. Overall, Point Pickup Driver provides an excellent opportunity for individuals seeking to earn extra income while enjoying the benefits of flexible, neighborhood-based work. (POINT PICKUP, 2023).



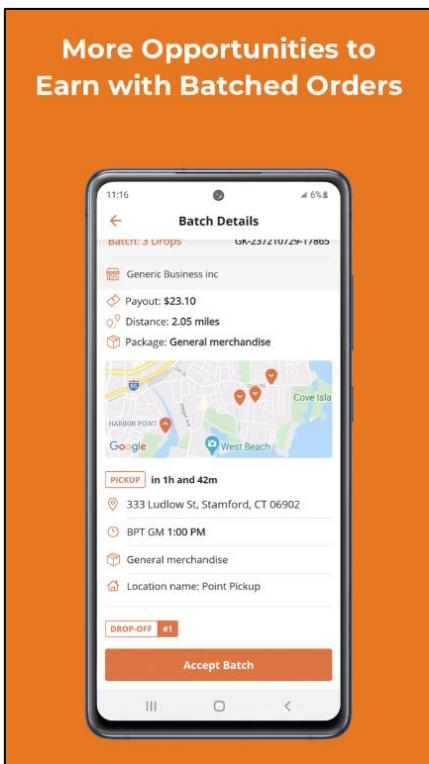


Image 1

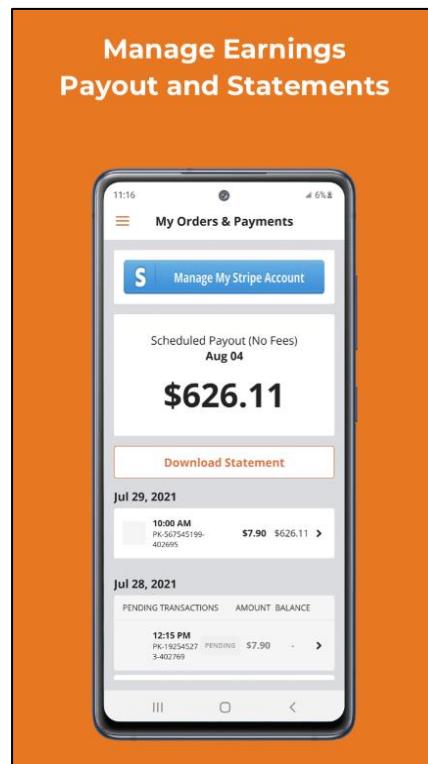


Image 2

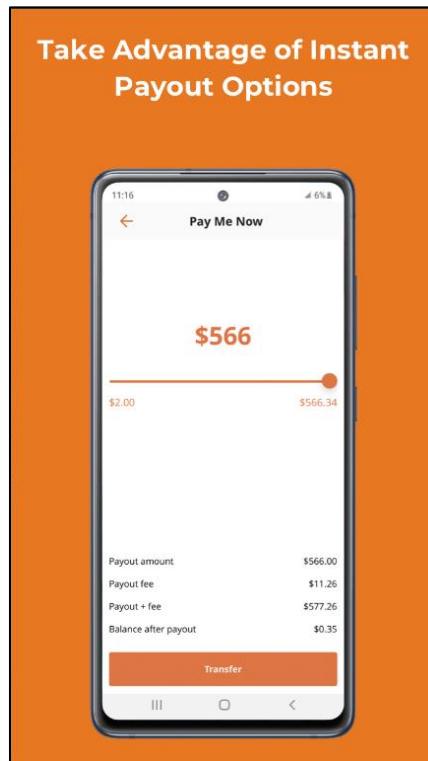


Image 3

## 16. Zippykind Delivery Driver

Zippykind is a comprehensive delivery management solution designed to boost efficiency and customer satisfaction in the fast-paced delivery services sector. It offers a wide range of features, including route optimization, automated dispatch, real-time tracking, digital proof of delivery, spending rewards programs, customer-to-driver tracking, autonomous communication, and API integration.

The platform enables businesses to optimize delivery routes, assign drivers efficiently, monitor deliveries in real-time, capture digital proof of delivery, track customer spending, and enhance the customer experience with features like "Uber-like" tracking. Additionally, Zippykind provides autonomous driver assignment, easy scheduling, recurring subscriptions for regular customers, advanced analytics, and seamless integration with various APIs for automation.

Overall, Zippykind empowers delivery businesses to streamline their operations, improve efficiency, and ultimately enhance customer satisfaction through its advanced and user-friendly features (ZIPPYKIND, 2023).

Image 1: View the orders

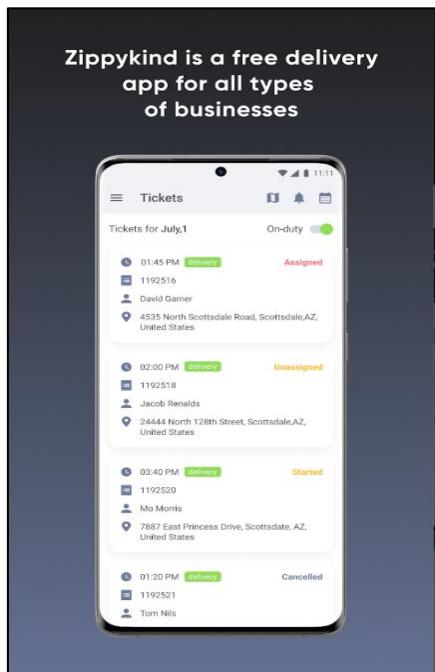


Image 2: Create routes

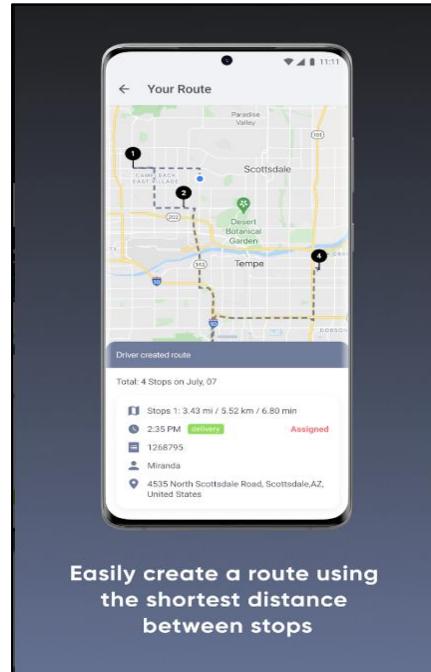


Image 3: View order details

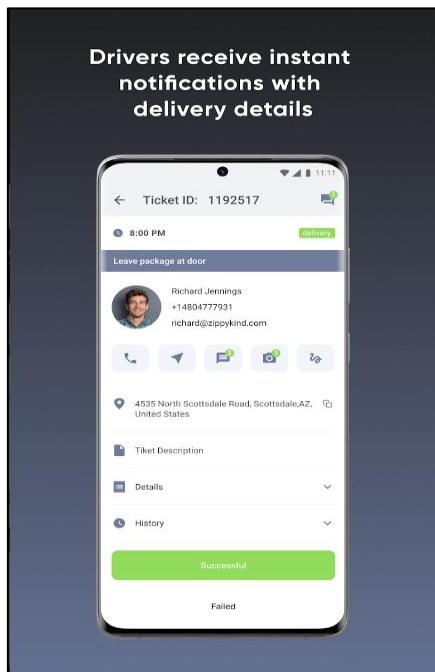


Image 4: Proof of delivery

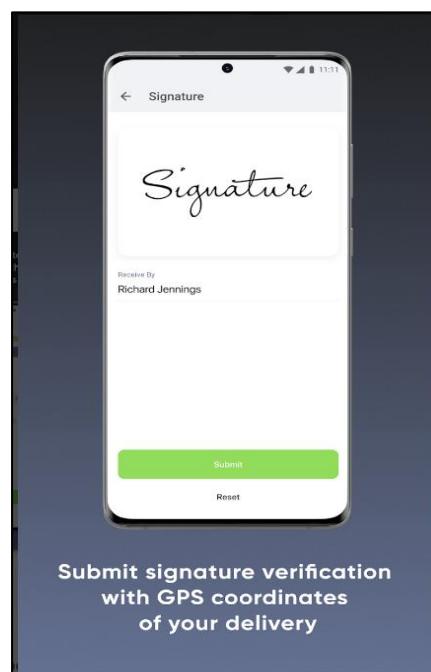


Image 5: Chat with customers

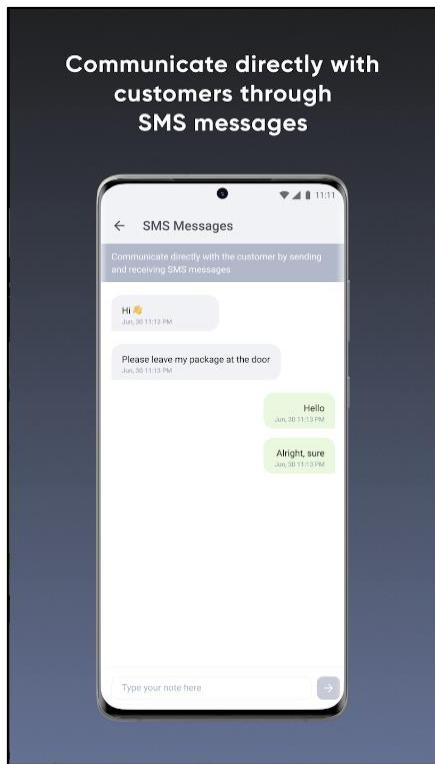
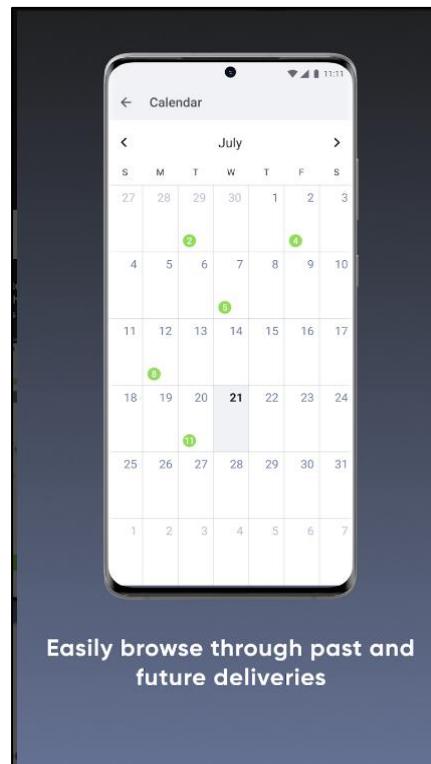


Image 6: View orders in calendar



## 17. WooDelivery Driver

WooDelivery Driver is a cutting-edge delivery management and order fulfillment app designed to help businesses optimize their delivery operations and improve customer satisfaction. Part of the WooDelivery software suite, it offers various benefits for businesses focused on hyperlocal automation and efficient delivery experiences.

Key features include the ability to capture proof of delivery, allowing drivers to take photos, collect signatures, or scan barcodes for accurate record-keeping and transparency. Real-time updates keep customers informed about their deliveries, reducing inquiries and building trust. The app streamlines task assignment, facilitates real-time communication, and enhances operational efficiency, ultimately saving time and resources.

WooDelivery Driver is a powerful tool for businesses looking to streamline their delivery management processes, enhance the customer experience, and achieve greater operational efficiency. It digitizes and automates delivery operations, allowing businesses to focus on providing excellent service to their customers and transforming their delivery operations for the better (WOODELIVERY, 2023).

### Some of the key highlights include:

- Delivery Management
- Vehicle Management
- Multi-merchant Solution
- Click & Collect Management
- Hyperlocal Analytics
- Custom Branding & White-labelling

Image 1: View the orders

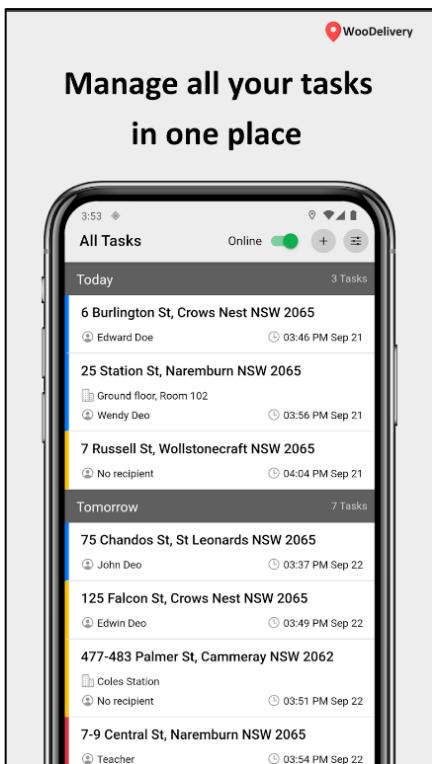


Image 2: Proof of delivery

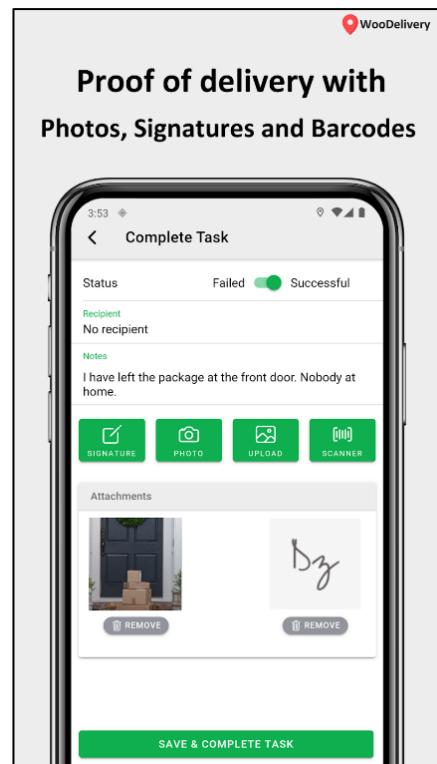


Image 3: Chat with your customers

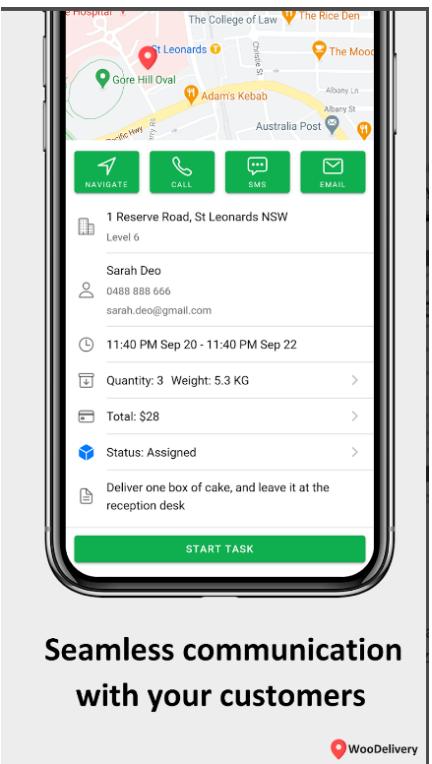
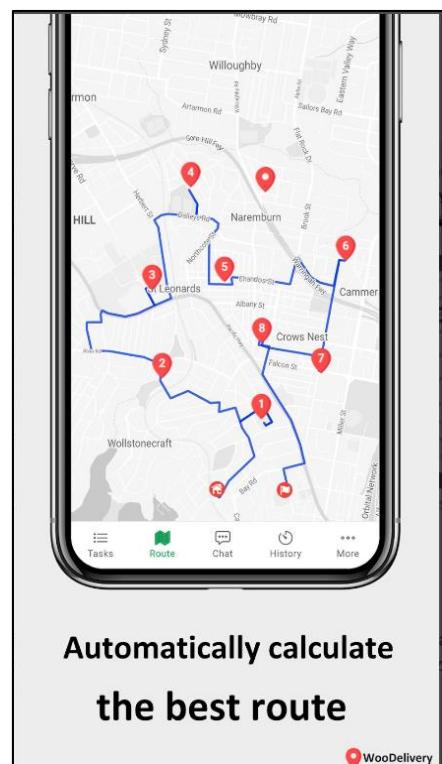


Image 4: Create the best route



[ ]

Image 5: Manage your orders

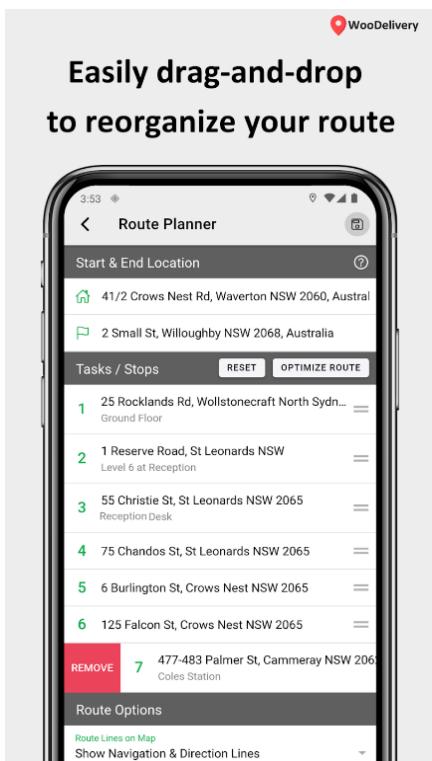


Image 6: Track your statistics

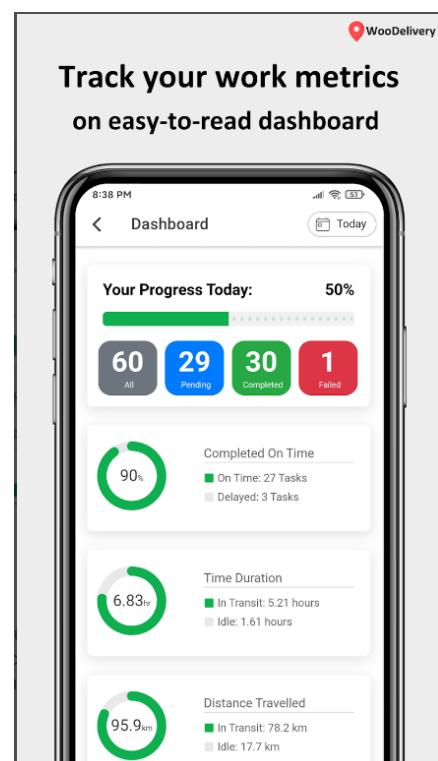
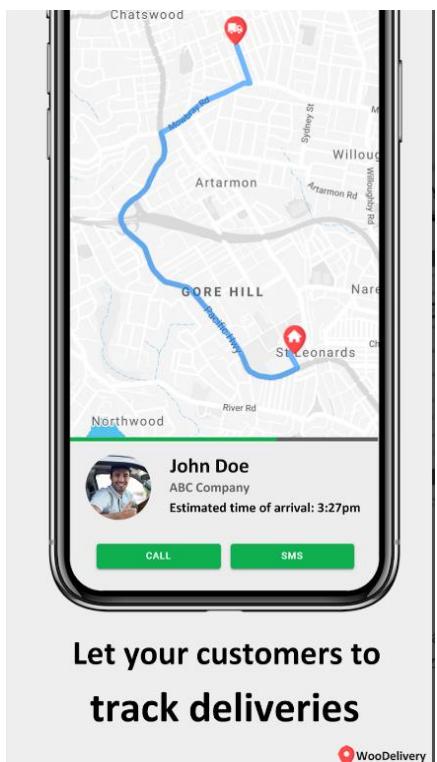


Image 7: Let customers to track delivery



## Comparison Table

	Real-time Tracking	ETA	GPS Navigation	Offline Support	In-app Communication	Trip or Delivery History	Proof of Delivery	Community	Safety Features	Maintenance
Glovo	✓	✓	✓		✓	✓	✓			
Eat Sleep Ride	✓		✓	✓		✓		✓	✓	✓
Rever	✓		✓	✓		✓		✓	✓	
Diablo Super Biker	✓					✓		✓	✓	✓
Harley-Davidson			✓		✓			✓	✓	✓
Deliveroo	✓	✓	✓			✓				
Track-POD	✓		✓	✓			✓			
Uber-Driver	✓	✓	✓							
Point Pickup Driver	✓		✓		✓					
Mo.ride						✓		✓		✓
Pickup:Pro	✓	✓			✓					
OptimoRoute Driver	✓	✓					✓			
Zippykind	✓	✓					✓			
WooDelivery	✓	✓	✓				✓			
GoTrack	✓						✓			
My Driver App	✓	✓	✓		✓		✓			
Droppath	✓	✓		✓	✓					

## PROPOSED WORK

According to our researches we have built up a mock up for our solution. This mock up has been built with general components in order to create a solution to be adaptive for different problems. You can change or add more features, functions or components to solve a specific problem. You will have more extensions to use for different problems in the end of this section. The problem we have assumed in this report is pick up and delivery mobile applications. So solution focused on picking up a target which is given by a service after that delivering it a specific location.

The mock up has five sections: Tasks, Routes, Reports, Maintenance and Profile.

**Tasks:** The tasks that are provided by a service or you can insert manually but we considered that they should be provided by a service.

**Routes:** The routes that when you select a task or tasks in the tasks section it will be created the best route automatically by optimisation algorithm.

**Reports:** In this section you can select a date range to see your reports like earned Money and travelling distance.

**Maintenance:** In this section you can follow your motorbike for maintenance. It gives you some information or some warnings.

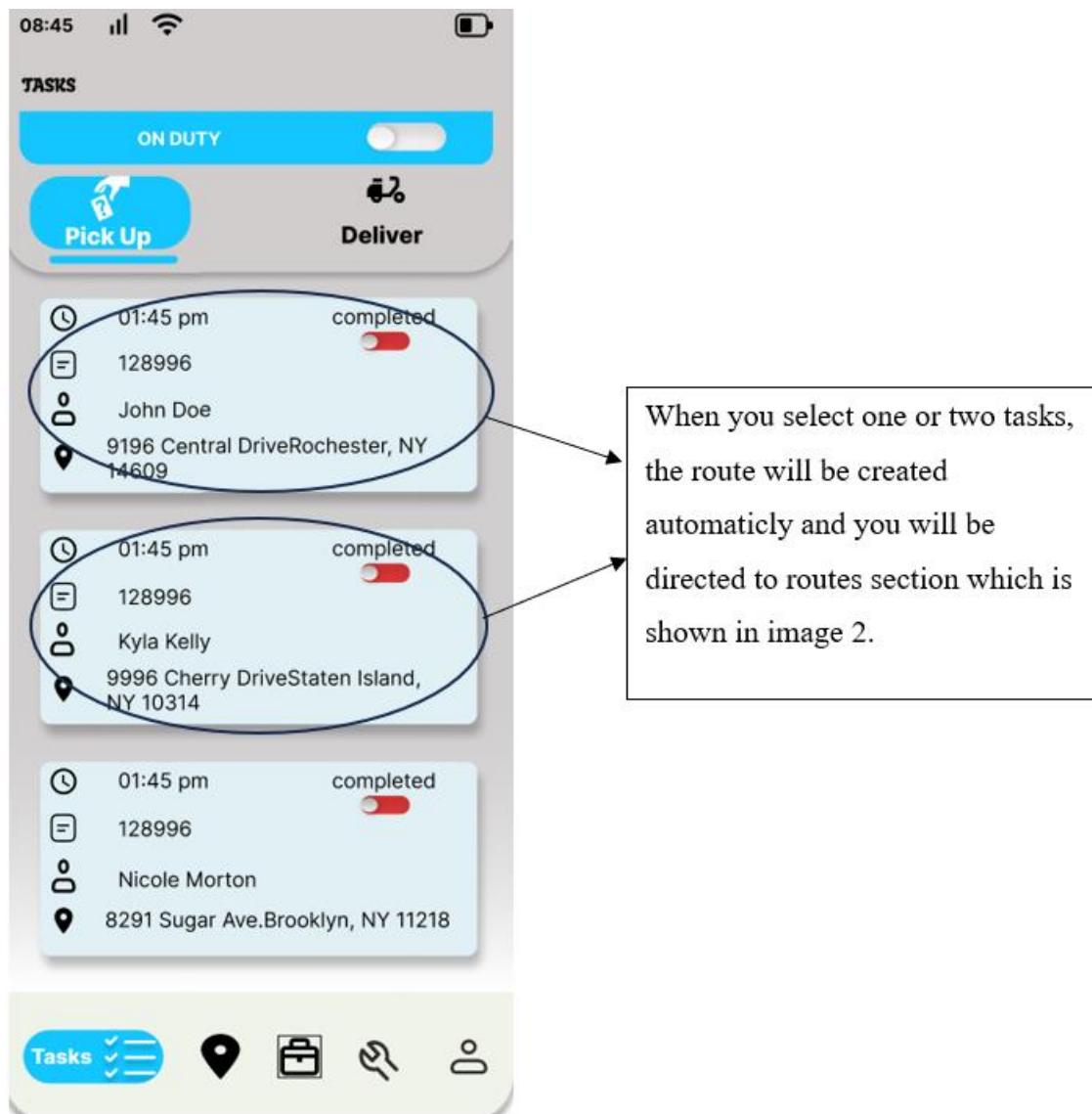
**Profile:** In this section you can see or change your informations about yourself.

For this mock up we used some features which are in the comparison table:

- Gps navigation
- Trip or delivery history
- Maintenance

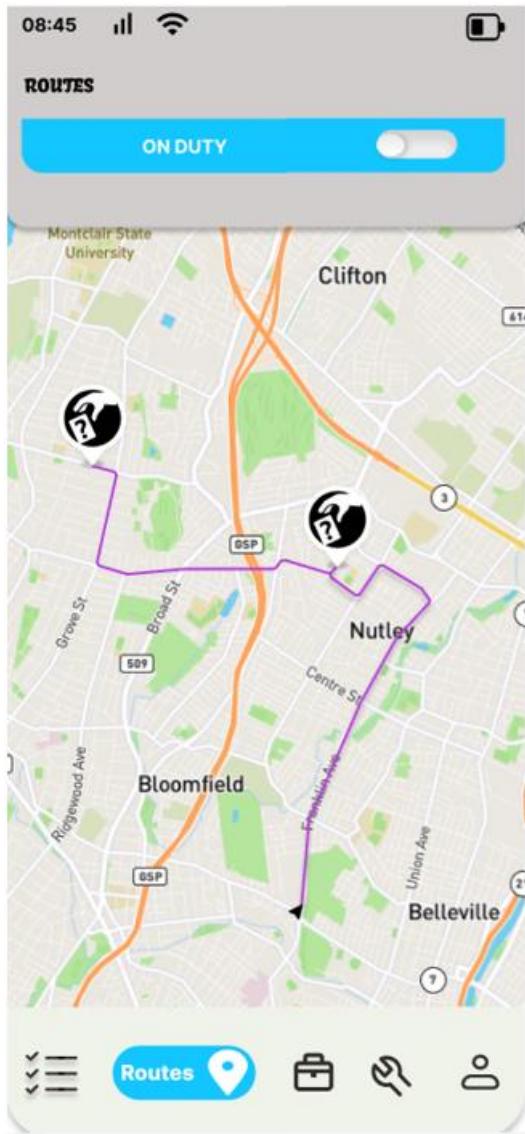
Those features are fundamental for this mock up to create basic pick-up and delivery app but the other features can be used in order to build more advanced mobile app.

## RESULTS

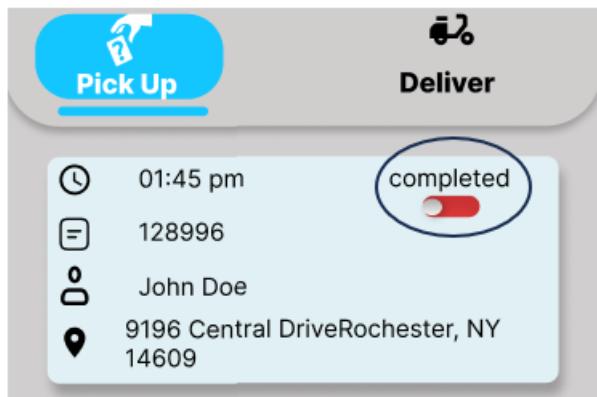


**Image 1:** You can see the tasks that you can do. Tasks section contains two tabs:

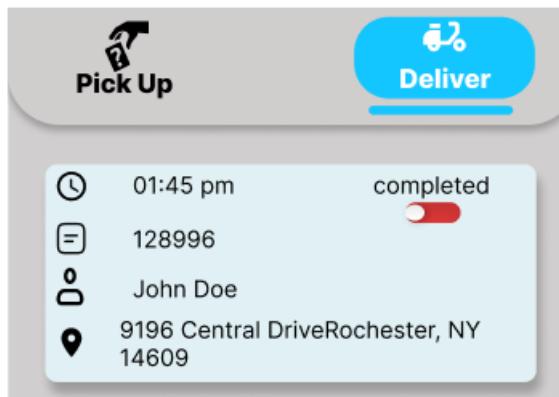
Pick-up and Deliver.



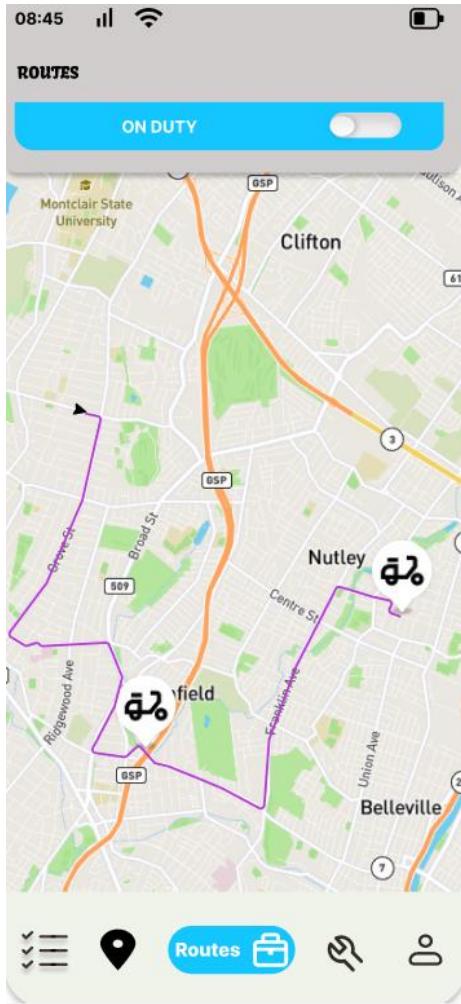
**Image 2:** You can see the points that you should go and pick up.



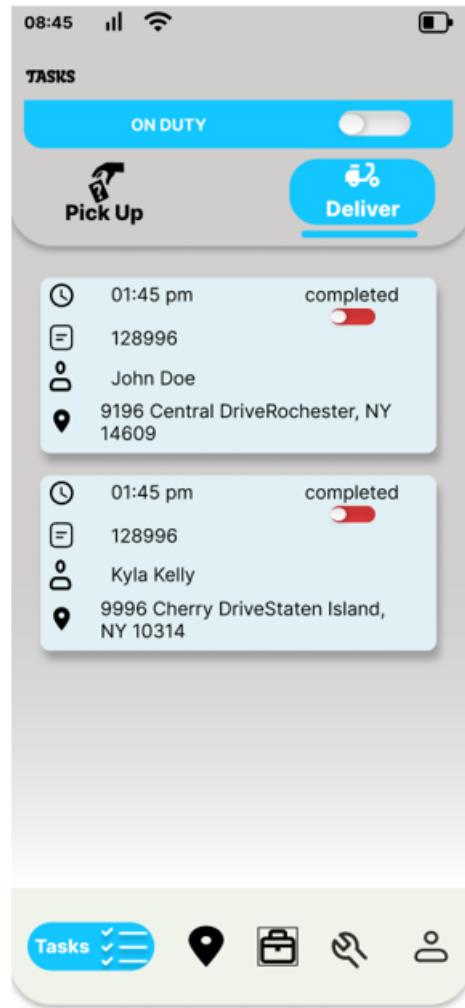
**Image 3:** You can switch on the toggle button after you completed tasks and the tasks which you completed will be ready to start in deliver section.



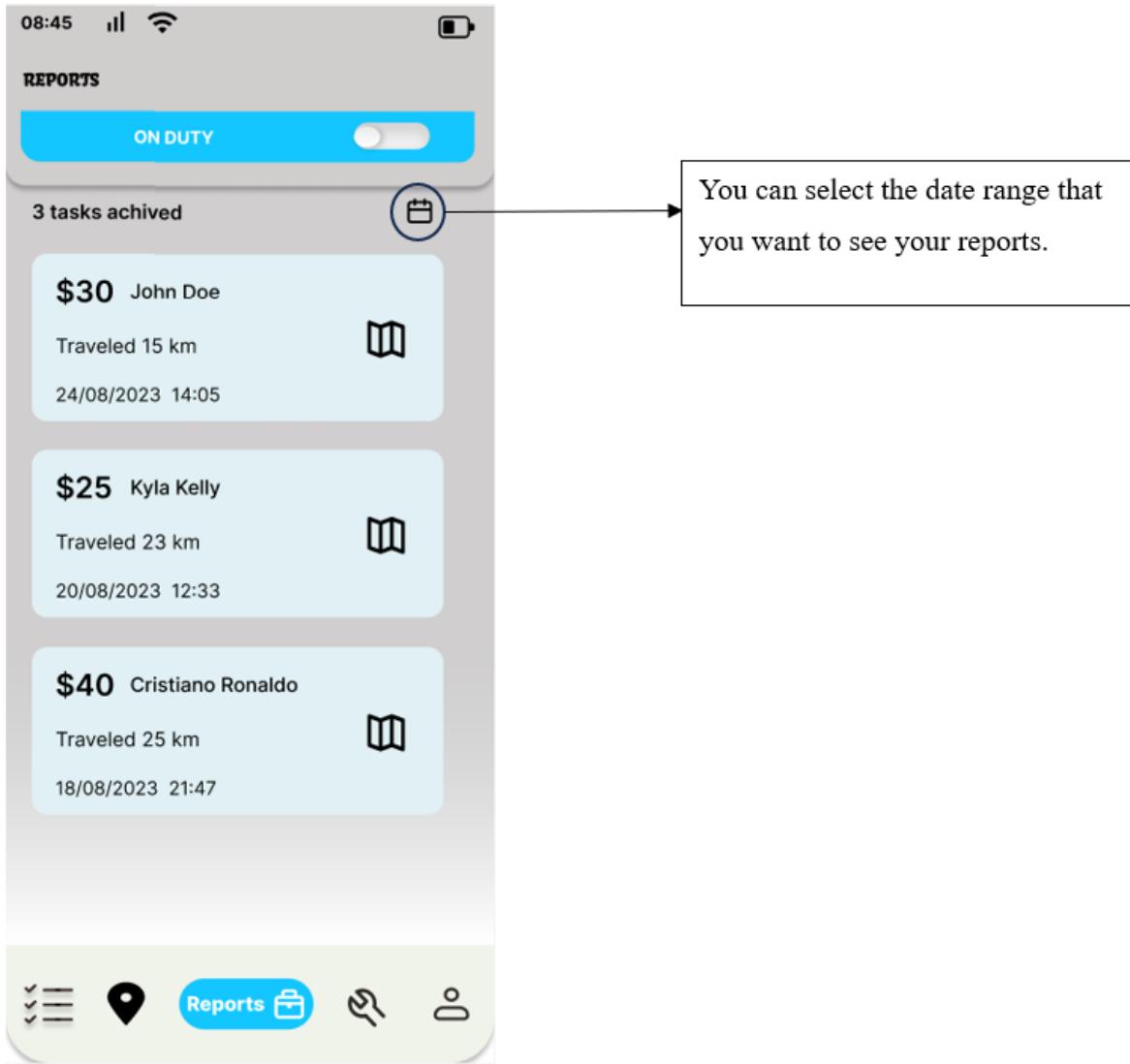
**Image 4:** You can also switch on the completed button after you delivered.



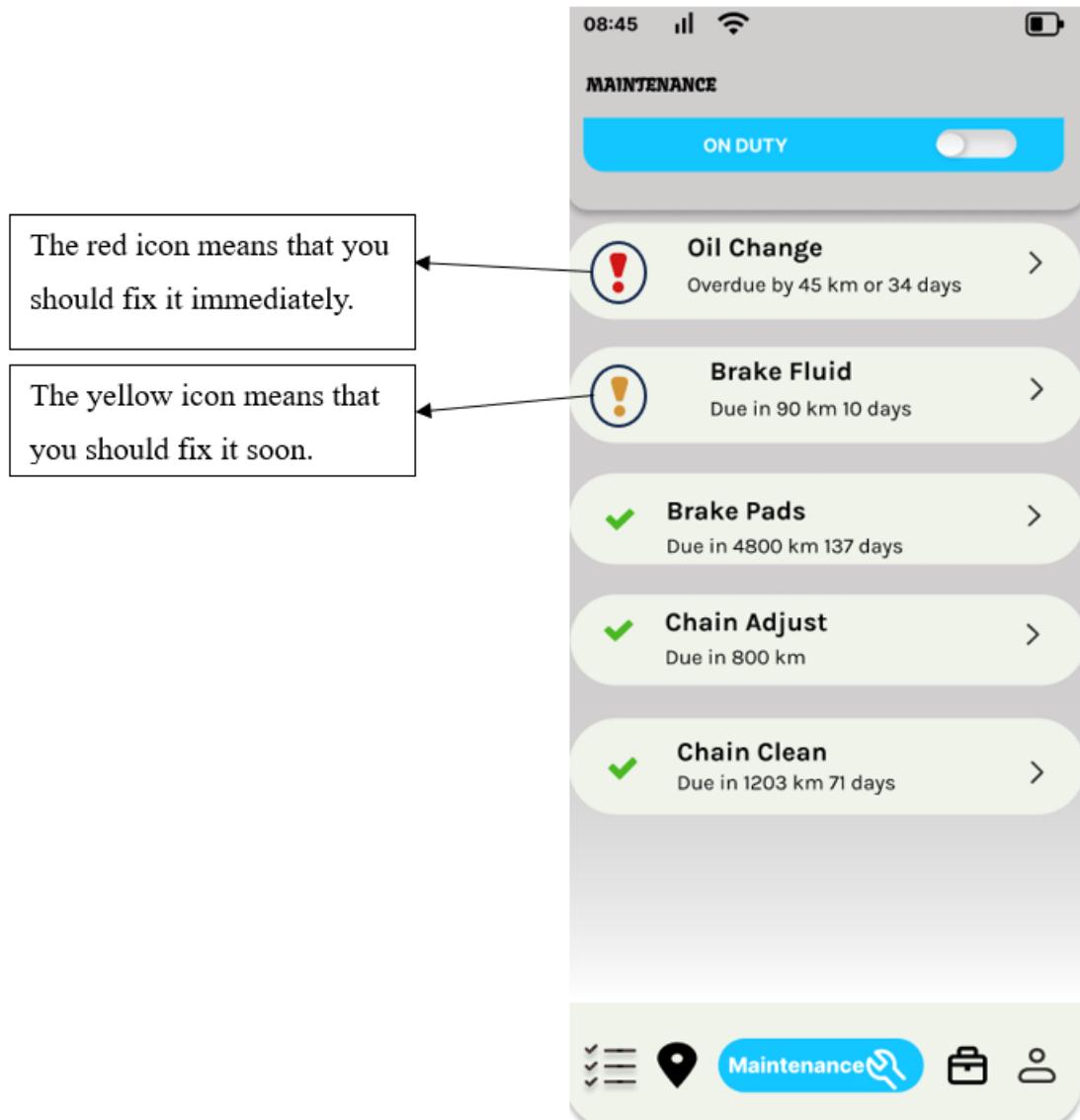
**Image 5:** The tasks that you already picked up are ready to deliver. You can start deliver by selecting one or more of them



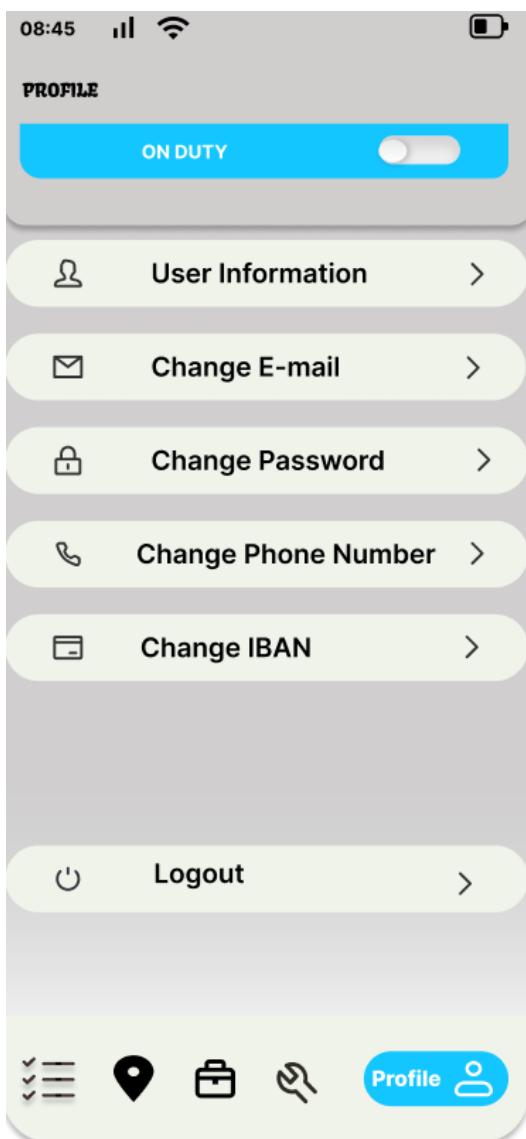
**Image 6:** The routes will be created to deliver automatically.



**Image 7:** After you finished the pick-up an deliver tasks both you will be able to follow the reports in the reports section.



**Image 8:** You can track the information about your motorcycle before it breaks.



**Image 9:** You can see and change your information.

## Extensions

**Route Optimization:** Dispatchers and drivers can build delivery routes that best suit the business requirements, or just let the system to automatically calculate the best routes. That's a lot of flexibility and can increase your business' productivity.

**Proof of Delivery:** Drivers can capture proof of delivery by adding signature, photos, notes, and barcodes to the delivery job which also logs the drivers GPS coordinates.

**Ratings & Review:** Collecting customers' feedback has to be an integral part of your business process. Upon task completion feedback collected are instantly synced to the dashboard.

**Click & Collect:** Consumers can 'click' and buy online, then 'collect' at a store, by picking up their items, rather than having them delivered.

**Barcode Scanning:** Dispatchers and drivers can scan custom barcodes at every stage of the delivery: scan to assign task, scan to find task, scan to load vehicle, and scan before complete task.

**Mileage & Time Tracker:** It uses phone's built-in GPS to track your distance travelled and time spent on each delivery and pickup tasks. Trip data is visualized on the detailed reports and dashboards.

**Communication Template:** Build custom message templates for your drivers. They can send the predefined messages to your customers by Email, SMS or WhatsApp on the driver app.

**Anonymous Communication:** Anonymize all communications between driver to customers. The phone numbers of two parties will be masked and anonymized to protect their personal phone numbers private.

**Shipping Label:** Create custom shipping labels with QR codes and PDF formatted delivery docket to suit your business needs. A delivery docket also serves as proof of delivery for the buyer and/or seller.

**Merchant / Customer Portal:** Create multiple merchants under your organization. Each merchant has access only to his dashboard where he can manage his tasks, contacts and other functionalities for the store. You can also create merchant accounts for your regular customers.

**Dynamic Task ETA:** ETA feature will give you more accurate the estimated time of arrival. Your customer is more likely to be at home when they know exactly when their order will be delivered.

**Automatic Customer Alerts:** Enable automated notifications to keep your customers updated with real-time email and SMS notifications at every stage of pick and delivery cycle.

## CONCLUSIONS

The report is based on pick up and delivery applications problem and solution. If you want to build up an application about it you can follow the instructions and solutions that are situated in this report. The solution produced to create a basic task application which is “pick-up and deliver” quickly. The user can quickly and successfully perform a specific task with the help of the application which is already shown in the result section.

Furthermore, more extensions can be added like “proof of delivery”, “communication template”, “communication template” and more which are already shown in the extensions section. In this way, a contribution can be made to increasing the functionality of the application. If you want to design an application for many different tasks and professions, features specific to that profession should be designed, since the solutions needed by each profession are different. A few features may be common, but the structure of the application must be fundamentally changed. Otherwise, unwanted functions may occur.

## REFERENCES

- SELVAN, Samuel Anbu; ANDREW, Susan Anita. **Emerging Trends Towards Online Food Delivery Apps in India.** Available at <https://dx.doi.org/10.2139/ssrn.3837117> Access in Jul 13 2023.
- SHRESTHA, Prashansa. **Hunger for food delivery apps grows in 2022 against all odds.** Available at <https://www.adjust.com/blog/hunger-for-food-delivery-apps-grows-in-2022-against-all-odds/> Access in Jul 13 2023.
- GLOVO at App Store. **Glovo Couriers.** Available at <https://apps.apple.com/pt/app/glovo-couriers/id1451416371> Access in Jul 13 2023.
- EAT SLEEP RIDE at App Store. **EATSLEEPRIDE Motorcycle GPS.** Available at <https://apps.apple.com/pt/app/eatsleepride-motorcycle-gps/id541036952> Access in Jul 13 2023.
- REVER at App Store. **REVER-GPS** motorcycle trips. Available at <https://apps.apple.com/pt/app/rever-gps-viagens-de-motos/id975571447> Access in Jul 01 2023.
- MO.RIDE. **Mo.Ride.** Available at <https://www.mo-ride.de/en/mo-ride-app/> Access in Jun 15 2023.
- DIABLO SUPER BIKER. **Diablo Super Biker.** Available at <https://www.pirelli.com/tyres/en-ww/motorcycle/diablo-super-biker-app> Access in Jun 22 2023.
- HARLEY DAVIDSON. **Harley Davidson App.** Available at [harley-davidson.com/pt/pt/content/h-d-app.html](https://harley-davidson.com/pt/pt/content/h-d-app.html) Access in Jul 8 2023.
- DELIVEROO. **Deliveroo Rider.** Available at <https://riders.deliveroo.co.uk/en/apply> Access in 11 Jul 2023.
- GO TRACK. **GoTrack App.** Available at <https://gotrackapp.com/food-delivery-software.html> Access in Jun 15 2023.
- PICK UP PRO at App Store. **Pickup:Pro.** Available at <https://apps.apple.com/us/app/pickup-pro/id1279613080> Access Jun 17 2023.
- TRACK POD. **Track-POD Proof of Delivery.** Available at <https://apps.apple.com/us/app/track-pod-proof-of-delivery/id1242578215> Access in Jul 19 2023.
- OPTIMO ROUTE. **OptimoRoute Driver.** Available at <https://apps.apple.com/us/app/optimoroute-driver/id1292045458> Access in Jul 25 2023.
- DROPPATH ROUTE. **Droppath Route Driver.** Available at <https://play.google.com/store/apps/details?id=tech.suzero.route> Access in Jun 25 2023.

**UBER DRIVER. Uber-Driver: Drive & Deliver.** Available at <https://apps.apple.com/us/app/uber-driver-drive-deliver/id1131342792> Access in Jun 18 2023.

**MY DRIVER. My Driver App.** Available at [https://play.google.com/store/apps/details?id=com.my.driver&hl=en\\_US](https://play.google.com/store/apps/details?id=com.my.driver&hl=en_US) Access in Jul 4 2023.

**POINT PICKUP. Point Pickup Driver.** Available at <https://apps.apple.com/us/app/point-pickup-driver/id1444146485> Access in Jun 22 2023.

**ZIPPYKIND. Zippykind Delivery Driver.** Available at <https://play.google.com/store/apps/details?id=zippykind.driver.app&hl=pt&gl=US> Access in Jun 17 2023.

**WOODELIVERY. Woodelivery App.** Available at <https://www.woodelivery.com/delivery-management/> Access in Jul 4 2023.