



DAYANANDA SAGAR
UNIVERSITY



**SCHOOL OF
ENGINEERING**

**DAYANANDA SAGAR UNIVERSITY
SCHOOL OF ENGINEERING**

Devarakaggalhalli, Harohalli, Kanakpura, Ramanagara Dt., Bangalore - 562112

SMALL E - BUSINESS LAUNCH PROJECT REPORT

“Little Riders”

Submitted By

SANA BANU	ENG22AM0053
NAGABOINA DHARSINI	ENG22AM0036
SAHANA PRIYA	ENG22AM0050
ANKITHA R	ENG22AM0005
POOJA N P	ENG23AM1002

**Under The Supervision Of
Prof. M. CHITHAMBARATHANU
Assistant Professor, Department of CST, DSU**

**DEPARTMENT OF COMPUTER SCIENCE & TECHNOLOGY
SCHOOL OF ENGINEERING
DAYANANDA SAGAR UNIVERSITY
(2024-2025)**



DAYANANDA SAGAR
UNIVERSITY



SCHOOL OF
ENGINEERING

DAYANANDA SAGAR UNIVERSITY SCHOOL OF ENGINEERING

Devarakaggalahalli, Harohalli, Kanakpura, Ramanagara Dt., Bangalore - 562112

CERTIFICATE

This is to certify that the work titled “Little Riders” is carried out by **Ms. SANA BANU (ENG22AM0053)**, **Ms. NAGABOINA DHARSINI (ENG22AM0036)**, **Ms. SAHANA PRIYA G (ENG22AM0050)**, **Ms. ANKITHA R (ENG22AM005)** And **Ms. POOJA N P (ENG23AM1002)** Bonafide students of Bachelor of Technology in Computer Science and Technology at the School of Engineering, Dayananda Sagar University, Bangalore in partial fulfillment for the award of degree in Bachelor of Technology in Computer Science and Technology, during the year 2024-2025.

Prof. M. Chithambarathanu
Assistant Professor,
Department of CST,
School of Engineering,
Dayananda Sagar University.

Dr. M. Shahina Parveen
Chairperson,
Department of CST,
School of Engineering,
Dayananda Sagar University.

Internal Examiner

External Examiner



DAYANANDA SAGAR
UNIVERSITY



SCHOOL OF
ENGINEERING

DAYANANDA SAGAR UNIVERSITY SCHOOL OF ENGINEERING

Devarakaggalahalli, Harohalli, Kanakpura, Ramanagara Dt., Bangalore - 562112

DECLARATION

We, **SANA BANU - ENG22AM0053**, **NAGABOINA DHARSINI - ENG22AM0036**, **SAHANA PRIYA G – ENG22AM0050**, **POOJA N P – ENG23AM1002** and **ANKITHA R - ENG22AM0005** are students of the sixth semester B.Tech in Computer Science and Engineering – Artificial Intelligence and Machine Learning , at School of Engineering, Dayananda Sagar University, hereby declare that the project phase - I titled “Little Riders” has been carried out by us and submitted in partial fulfillment for the award of degree in Bachelor of Technology in Computer Science and Engineering – Artificial Intelligence and Machine Learning during the academic year 2023-2024.

SANA BANU - ENG22AM0053

NAGABOINA DHARSINI - ENG22AM0036

SAHANA PRIYA G – ENG22AM0050

POOJA N P – ENG23AM1002

ANKITHA R – ENG22AM0005

Place: Bangalore

Date:

ACKNOWLEDGEMENT

It is a great pleasure for us to acknowledge the assistance and support of many individuals who have been responsible for the successful completion of this SMALL E- BUSINESS LAUNCH PROJECT REPORT. First, we take this opportunity to express our sincere gratitude to the School of Engineering Technology, Dayananda Sagar University for providing us with a great opportunity to pursue our bachelor's degree in this institution. We would like to thank **Dr. Udaya Kumar Reddy K R, Dean, School of Engineering Technology, Dayananda Sagar University** for providing this opportunity. It is an immense pleasure to express our sincere thanks to **Dr. M. Shahina Parveen, Chairperson, Department of Computer Science and Technology, Dayananda Sagar University**, for providing the right academic guidance and motivating us during the course. We would like to thank our teacher **Prof. M Chithambarathanu Asst. Professor, Department of Computer Science and Technology, Dayananda Sagar University**, for sparing his valuable time to extend help in every step of our course and the SMALL E- BUSINESS LAUNCH PROJECT REPORT, which paved the way for smooth progress and the fruitful culmination of the project.

ABSTRACT

Parents often worry about their safety when their children are being taken from one place to another, especially when they are moving through areas with higher traffic and security threats in urban environments. Little Riders is an innovative transportation service meant to offer children a safe, trustworthy, and quick pick-and-drop facility. Smart route optimization, vetted driver identity, and real-time GPS tracking are brought together in this project to enhance kid transportation security and convenience.

Thanks to the system's automated alerts, emergency response equipment, and real-time tracking, parents can monitor their child's journey in real time. Background-checked drivers receive training to ensure children are being kept in a secure setting. Additionally, intelligent routing optimizes routes of travel to lower delay times while maintaining strict safety guidelines.

Little Riders offers a high-tech platform that enhances security and ease of use for parents compared to traditional school transportation services. To provide families with reassurance, this venture aims to transform child transportation by focusing on real-time monitoring, safety protocols.

Keywords: Safe transport of children, real-time GPS tracking, certified drivers, smart route planning, parental monitoring, emergency alerts, and technology-based platform.

TABLE OF CONTENTS

1. Introduction -----	9
2. Literature Review -----	12
3. Business Model	
3.1 Idea and Competition -----	14
3.2 Customer and Need -----	14
3.3 Financials and Revenue Model -----	15
4. Software Requirements -----	17
5. Hardware Requirements -----	18
6. Screenshots -----	19
6.1 Parent Registration -----	19
6.2 Driver Registration -----	20
6.3 Location -----	21
6.4 Maps -----	22
6.5 Rides -----	22
7. References -----	23
8. Conclusion -----	24
A. Appendix -----	25
A.1 Logo Design Report -----	25
A.2 Survey Report -----	26
A.3 Interview Report -----	28
A.4 Data collection/Abstraction Report -----	28

LIST OF FIGURES

1. Architecture Diagram -----	09
2. Parent Registration -----	19
3. Driver Registration -----	20
4. Location -----	21
5. Maps -----	22
6. Rides -----	22
7. Company Logo -----	23
8. Survey Analysis -----	25

LIST OF TABLES

1. Comparative Analysis of Little Riders and Existing Traditional School Transport Platforms --- 19

1. INTRODUCTION

In today's urban settings where everything happens at a quick pace, proper child transportation has emerged as a concern for parents. With increased traffic congestion and risk factors, the service providers for regular school transport now stand challenged to provide a fair amount of ample real-time monitoring for safety guarantee. Laying down a backdrop for such challenges, Little Riders offer an innovative and technology-oriented transport solution for children.

Offering better services with a pick and drop requested service can now be the safety pick from Little Riders, which uses advanced technologies such as real-time GPS tracking, verified driver authentication, and smart route optimization. Emergency response systems come into play to perform live tracking and give automated alerts for parents to follow in real time and relax about their child's journey. In addition, every driver faces a thorough background check and vetting procedure, and special training is given with high importance towards security.

The integration with Google Cloud to route services better in terms of timing and safety separates Little Riders from the conventional form of school transport service. The project not only offers a smooth mode of transportation for kids but also enables a trustworthy, convenient, and transparent way for parents to manage their kid's daily commute. By binding technology with a safety-first approach, Little Riding is the forerunner in revolutionizing child transport, setting higher standards for security and efficiency.

Architecture Diagram:

Little Riders architecture is built to provide a safe, real-time, and technology-based children's transport service. The system has two main user interfaces—Parent Panel and Driver Panel—both of which communicate with a solid backend API service layer, facilitating smooth interaction and coordination.



Figure 1: Architecture Diagram

1. Parent Panel:

This panel is meant for parents, enabling them to:

- Book and schedule pick-up and drop-off services.
- Get real-time location tracking of their child's ride.
- Receive instant updates regarding ride progress or emergencies.
- Access history of rides and give ratings.

2. Driver Panel:

The driver panel is intended for authenticated and verified drivers. It allows them to:

- Accept booked rides.
- Obtain optimized routes through GPS integration.
- Alert parents on child pickup/drop-off.
- Send emergency notifications if required.

3. Backend Services (API Layer):

At the centre of the system are the backend services, each with a specific role:

Authentication Service

Restricts entry to the system to only the authorized parents and confirmed drivers by taking care of user login and verification.

Ride Scheduling Service

Handles all the scheduling tasks, such as the allocation of drivers to rides and timing optimization based on the requests of parents.

Notification Service

Provides real-time updates and notifications to the parents and drivers, such as ride start, finish, delays, or emergencies.

Real-Time Tracking Service

Tracks the vehicle's location using GPS and offers live updates to the parent panel.

Emergency Alert Service

Permits the driver or the system to alert parents and the backend instantly in an emergency situation, promoting safety.

4. Database Systems:

The backend facilities are backed by three central databases, each with a dedicated function:

User Database:

User Database is used to store and track all data about users of the system, i.e., parents, drivers, and administrators. It stores critical information like usernames, passwords (securely hashed), personal information, user roles, and verification status. This database is a central component of the Authentication Service, making sure that only the intended users have access to the system. It also associates users with their corresponding activities, like ride requests or driving shifts. Through the handling of structured user profiles, this database provides a safe and personalized experience for each user accessing the system.

Ride History Database:

The Ride History Database maintains a detailed history of all completed and issued rides in the past in the system. It tracks ride information such as timestamps, pickup and drop points, assigned drivers, and route details. Historical data is used by parents to view prior journeys, enables the system to provide reports, and aids functionality such as scheduling repeated rides. It is also beneficial for backend auditing and analysis, which assists in service quality enhancement and detecting any issues or delays in the transportation process. Keeping ride history transparent helps establish trust with parents.

Feedback Database:

The Feedback Database accumulates and stores parent feedback on their experience with each driver and ride. It can comprise ratings, comments, and suggestions provided through the Parent Panel once every finished ride. The system utilizes this information to track driver performance, spot service problems, and uphold quality control. Regular feedback assists in revising driver training, making enhancements, and in ensuring parent concerns are resolved in a timely manner. By including feedback within the system, Little Riders encourages ongoing improvement and satisfaction.

2. LITERATURE REVIEW

Market Trend and Consumer Behaviour Analysis:

Increasing urbanization, working parents, and safety concerns are some of the factors that promote the growing child transportation market. Schools, or parents, usually look for reliable setups enabled by technology with real-time updates, secured handling, and easy scheduling. Services offering any sort of transparency are features that consumers desire, such as tracking via GPS, verified drivers, and instant alerts. Alongside this, smartphone penetration is also a major factor that attracts parents to mobile app-based services. As safety and convenience are paramount, consumers have in fact been forced to turn away from traditional school transport services and welcome smart, on-demand offerings like Little Riders that provide comfort and control to the parent over their child's commute.

Comparative Study:

1. Real-time Tracking

- Traditional Transport: Generally, does not allow live tracking, with parents depending on fixed schedules or calls to locate the transport.
- Little Riders: Real-time GPS tracking is provided in the mobile app, enabling parents to watch the journey of a child live.

2. Driver Verification and Training

- Traditional Transport: Most of the times, they hire drivers without any background check or safety training.
- Little Riders: Drivers are police-verified for background checks and then trained in child safety and behaviour

3. Parent Monitoring

- Traditional Transport: Limited or no communication upon pickup; parents are left in the dark.
- Little Riders: Offers real-time monitoring with mobile notifications, live location, and ride status.

4. Safety Protocols

- Traditional Transport: Limited security protocols; emergency response is late and uncoordinated.
- Little Riders: Offers emergency alert buttons, real-time alerts, and pre-specified response procedures for safety incidents.

5. Route Optimization

- Traditional Transport: Takes pre-set routes regardless of traffic and delay, which may create inefficiencies.
- Little Riders: Uses AI-based smart routing for minimizing travel time and avoiding traffic congestion.

6. Communication

- Traditional Transport: Communication is normally manual—calls or messages between parents and drivers.
- Little Riders: Offers in-app communication, instant notifications, and live updates for simple interaction.

7. Scheduling Flexibility

- Conventional Transport: Functions based on strict, pre-arranged plans that fail to accommodate individual requirements.
- Little Riders: Offers flexible scheduling, where parents are able to reserve pickups and drops according to real needs.

8. Technology Integration

- Conventional Transport: Limited or outdated technology use; rarely used in conjunction with digital interfaces.
- Little Riders: Completely tech-enabled with a dedicated app, automation, data analytics, and GPS technology.

9. Convenience for Users

- Conventional Transport: Coordination by hand; poor transparency with service quality.
- Little Riders: Very user-friendly, offering a seamless app experience, easy scheduling, and immediate support.

10. Cost Effectiveness

- Traditional Transport: Less expensive, but less features and sacrifices safety.
- Little Riders: Slightly premium price, but offers more value through enhanced safety, convenience, and peace of mind.

3. BUSINESS MODEL

3.1 Idea and Competition:

Idea:

The fundamental concept of Little Riders is to build a smart, safe, and tech-enabled child transportation service. As city traffic gets more and more unpredictable and security issues grow, parents want more than the ride—they need real-time visibility, verified drivers, and robust safety measures. Little Riders fills this gap with the specialized child pick-and-drop platform that is driven by GPS tracking, intelligent route optimization, and machine learning.

The system enables parents to track their child's journey in real-time, get automatic notifications, and have access to an emergency response system, promoting safer and more transparent transportation. Further, authentication of drivers, background checks, and route optimization are handled through data engineering and optimization processes, such that children are transported in the safest and most optimized manner.

Competition:

Little Riders competes in a segment currently covered by conventional school bus services, ride-hailing apps (such as Uber, Ola), and private vans. But these alternatives usually do not have features aimed at kid-centric safety, real-time tracking, and driver responsibility.

What differentiates Little Riders is its sole emphasis on kids' transportation with the incorporation of features that others do not consider:

- Real-time GPS tracking for parents to monitor
- Route optimization with AI technology to minimize travel time
- Trained and verified drivers dedicated to child safety
- Emergency and automated alarm features

Little Riders is designed specifically to address the issues of child safety in transport, unlike general transport services. Its technology-led design, ease of use, and security-oriented design provide a differentiated value proposition that places it in a better position in the market compared to general transport services.

3.2 Customer and Need:

The immediate customers of Little Riders would be parents and guardians of school-going children, especially people living in urban and semi-urban cities where traffic congestion and safety concerns are rampant. Schools, day-care centres, and educational institutions can also be indirect customers or partners who would like to offer safe transportation services to the families they serve.

- Child Safety in Transit: Parents need a service that assures their child's physical and emotional safety during transit to and from school or daycare.
- Real-Time Tracking & Monitoring: Busy parents want to know where their child is while in transit. Little Riders fulfils this with real-time GPS tracking and instant alerts.
- Reliable Drivers: Traditional transport services come with uncertain or unverified drivers. Little Riders delivers peace of mind with background-screened, certified drivers.
- Timely and Safe Transportation: With traffic issues increasing, timely pick-up and drop-off is the need of the hour. Our system uses smart route optimization to minimize delay.
- Emergency Management: Parents should be prepared for any unexpected situation. Little Riders provides automated alert and integrated emergency response systems.

Having these basic needs met, Little Riders is not just a transport solution anymore—it is a daily support system for families with guaranteed, clear, and efficient transport of children.

3.3 Financials and Revenue Model:

Little Riders has the potential to be a scalable and financially sustainable platform, with diversified revenue streams and promising growth in urban and semi-urban pockets. The venture leverages technology to contain operational costs while delivering maximum user value with quick and secure services.

Revenue Model

1. Subscription-Based Plans

- Quarterly or monthly plans for parents based on distance, number of journeys, and children's number.
- Tiered pricing (Basic, Standard, Premium) for different levels of features such as live tracking, priority support, and alerts.

2. School and Daycare Partnerships

- Portals and partnerships with schools and daycares to offer mass transportation services.
- Schools and daycares are charged a fee for joining the platform to organize their transport business.

3. One-Off Rides

- Facility for parents to book a one-off or occasional ride at a fixed rate, with dynamic pricing based on time- and distance.

4. Advertisement & Promotions (Optional Future Stream)

- Non-intrusive ad or partnership with children-friendly brands on parent app UI might be an ancillary revenue stream. Financials and Growth Potential
- Low Initial Infrastructure Cost: Since existing cars and drivers are being used, capital expenditure remains low.

- Scalability: The tech stack (Flask, TensorFlow, JavaScript, SQL) is easy to scale across cities with similar infrastructure.
- Urban Concentration Demand: With increasing dual-income households and busy lives, there is strong market demand for secure and hassle-free child transport services.
- Break-even Prospect: With the initial school customer base and 100+ subscriptions, Little Riders Can project break-even in 12–18 months.

With technology-driven efficiency, customer confidence, and smart alliances, Little Riders offers a sustainable and profitable business model with room for high growth.

4. SOFTWARE REQUIREMENTS

The Little Riders project is developed on top of a mix of fundamental web and AI technologies to provide security, real-time monitoring, and intelligent route optimization. The following are the major software components employed:

1. Flask (Backend Framework)

- Purpose: Utilized to create the backend server and RESTful APIs.
- Role: Manages user authentication, data communication, business logic, and integration with the machine learning model.
- Reason: Easy to use and lightweight, Flask is perfect for rapid development and effective API management.

2. TensorFlow (Machine Learning Library)

- Purpose: Drives the machine learning aspects of the system.
- Role: Applied to optimize routes, forecast traffic patterns, and make smart decisions.
- Reason: Provides effective tools for ML model building and training.

3. JavaScript (Frontend Development)

- Purpose: Constructs the interactive user interface of the application.
- Purpose: Facilitates real-time functionality such as live location tracking and dynamic web page **updates**.
- Role: Allows for responsive, user-centric web experiences to be created.
- Reason: JavaScript is the must-have for creating responsive user-centric web experiences.

4. SQL (Database Management)

- Purpose: Storing and managing all of the necessary data like user profiles, driver details, trip histories, and GPS logs.
- Role: Facilitates query efficiency and secure data storage.
- Reason: SQL databases are consistent and secure, making them a suitable choice for applications requiring consistency and security.

5. HARDWARE REQUIREMENTS

1. Server Machine (Cloud or On-Premises)

Purpose: Serves as the hosting platform for the backend server, databases, and machine learning models.

Role: Receives all incoming requests, processes APIs, stores data, and performs ML inference operations.

Reason: Having a reliable server (ideally with cloud scalability such as AWS, GCP, or Azure) provides availability, fault tolerance, and accommodates concurrent user operations.

2. GPS-Enabled Mobile Devices (Smartphones/Tablets)

Purpose: Employed by parents and drivers for use in real-time.

Role: Facilitates real-time tracking, location sharing, and scheduling of rides.

Reason: GPS-enabled, camera-enabled, and internet-enabled devices guarantee smooth operation of app features such as tracking, alerts, and notifications.

3. Internet Connectivity

Purpose: Establishes a stable communication channel between client applications and server infrastructure.

Role: Facilitates real-time data transfer, live GPS positioning, and real-time notifications.

Reason: High-speed and stable internet is required to provide a fluid and real-time user experience, particularly for mobile clients.

4. Development Workstation

Purpose: Utilized by the development team to develop, test, and deploy the application.

Role: Executes development tools like code editors, local servers, and ML model trainers.

Reason: Mid to high-end machines with a minimum of 8 GB RAM, SSD storage, and multicore CPUs are ideal for effective coding and testing operations.

5. External Storage (Optional for Backups)

Purpose: Saves backups, logs, and archived data for audit and recovery purposes.

Function: Facilitates disaster recovery, rollback, and system auditing.

Cause: Offers a second layer of data protection, particularly for important ride history and user rating data.

6. SCREENSHOTS

6.1: Parent Registration

The parent registration process in the Little Riders app is conducted to provide secure onboarding and hassle-free subscription management for users. On the registration page, parents are asked to provide their Username, Email, and Password, and then confirm the password to validate. Then they choose a subscription plan, e.g., "Basic – ₹299/month", as per their requirements. The Role is set as "Parent" to tailor the app experience suitably. The following part enables parents to select a payment mode, i.e., Card or UPI, and then enter the UPI ID if the latter mode is selected. As soon as the user presses "Pay Now," the app initiates the transaction and shows a success message upon successful payment. Lastly, with payment received, the parent can click the "Register" link to finish the process so they can begin using the app for scheduling and monitoring their child's rides safely.

Register for Little Riders

Username: sahana

Email: sahana@gmail.com

Password:

Confirm Password:

Choose Plan: Basic - ₹299/month

Role: Parent

Choose Payment Method:

Card UPI

Enter UPI ID: example@upi

Payment Successful! You can now register.

Register

Figure 1: Parent Registration

6.2: Driver Registration

This is a Driver Registration form for the Little Riders platform, used to onboard drivers who will be transporting children. The form gathers important information such as the username, email, and password (with repeat) for creating an account. Drivers must choose a subscription plan—in this example, the "Basic - ₹299/month" plan. They must also define their role as "Driver". For authenticity and compliance, the form collects important identification information such as the Driving License (DL) Number, Aadhaar Number, and Vehicle Number. This provides an important aspect of verification of the credentials of the driver and provides a safe and responsible child transport facility.

The image shows two versions of a driver registration form. The top section is a simplified version with fields for Aadhaar Number, Vehicle Number, and a red 'Register' button. The bottom section is a full 'Register for Little Riders' form with more detailed fields: Username, Email, Password, Confirm Password, Choose Plan (Basic - ₹299/month), Role (Driver), DL Number, Aadhaar Number, and Vehicle Number. The background of the page is divided into four quadrants: top-left is blue, top-right is green, bottom-left is blue, and bottom-right is green.

Figure 2: Driver Registration

6.3: Location

Pickup and drop location page is an important feature of the "Little Riders" application which enables parents to book a ride for their kid easily. The page has a map-based or manual entry system in which users can specify either pickup or drop location by clicking the corresponding radio button. When the user chooses "Set Pickup" or "Set Drop," the user has the ability to insert the address directly or tap on the map to fill in the coordinates automatically. The user is also asked for the pickup time and date via a date-time picker. Once both the locations and time are established, the system calculates the fare dynamically based on the

distance and shows it below. The "Book Ride" button completes the booking of the ride, and the whole process is efficient and convenient for parents booking travel for their kids.

The figure consists of two vertically stacked screenshots of a mobile application. Both screenshots have a green gradient background with the text "Welcome, sahana" at the top. The first screenshot shows the initial state of the booking form, with the "Set Pickup" radio button selected. It includes fields for "Pickup Location" (with a placeholder "Enter pickup address or click map"), "Drop Location" (with a placeholder "Enter drop address or click map"), "Pickup Time" (a date-time picker showing "dd-mm-yyyy -- : --"), and a fare display of "Fare: ₹0". A red "Book Ride" button is at the bottom. The second screenshot shows the form after input, with the "Set Drop" radio button selected. The "Pickup Location" field contains the coordinates "12.97395, 77.55146", the "Drop Location" field contains "13.01242, 77.66716", and the "Pickup Time" field shows "27 - 05 - 2025 21 : 27". The fare is now displayed as "Fare: ₹342.32". The "Book Ride" button remains at the bottom.

Figure 3: Location

6.4: Maps

The "Track Ride" option in the "Little Riders" app gives parents real-time tracking of the child's ride through an interactive Google Maps interface. As seen from the image, the map indicates the present route and location of the vehicle, allowing parents to track the journey easily and accurately. The map has both "Map" and "Satellite" view modes for improved clarity and is placed inside a clean, visually pleasing interface that employs the use of a gradient background. This feature increases safety and peace of mind by enabling parents to remain aware throughout the duration of the ride.

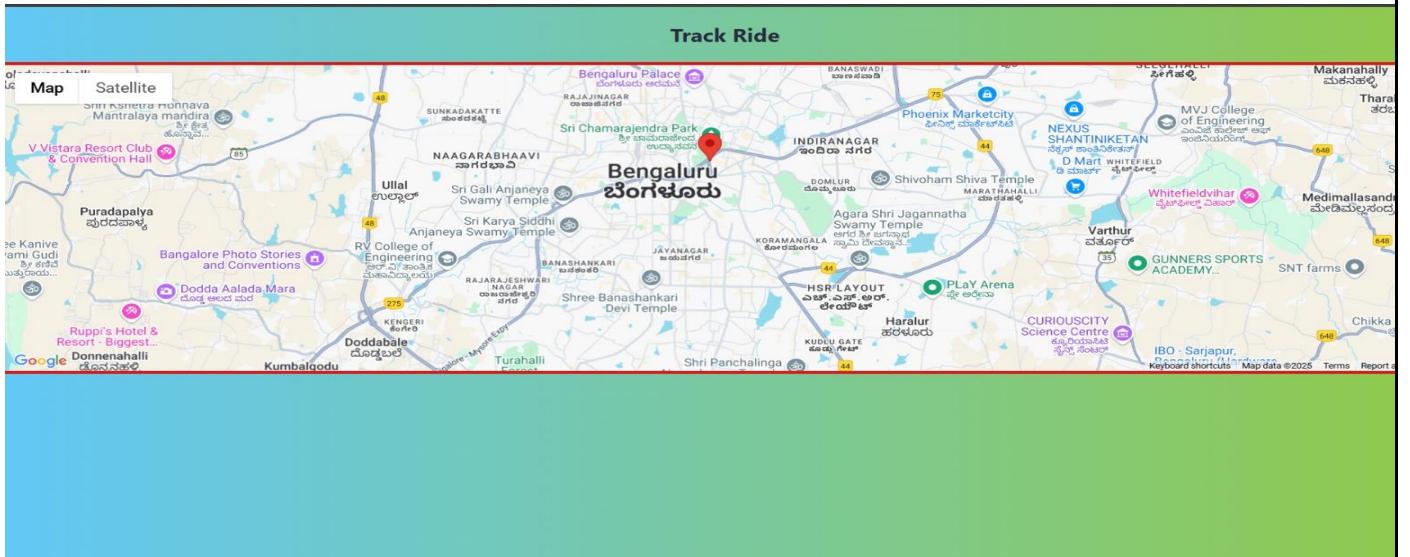


Figure 4: Map

6.5: Rides

The interface of the application supports a child transport system where drivers can see and accept ride orders from parents, with each displayed request showing the pickup and destination coordinates, time scheduled, fare, and route indicators. When a driver accepts a ride, it will be shown under the "Your Accepted Rides" section for confirmation. The "Track Ride" page offers a real-time map view of Bengaluru as the central point, allowing real-time tracking of the ride progress, thus providing transparency and safety during the pickup and drop-off of the child.

Figure 5: Rides

7. CONCLUSION

Little Riders stands as an all-encompassing technology-based method which solves the modern problem of safe child transportation within urban regions and their surrounding areas. The platform uses real-time GPS tracking alongside smart route optimization and verified driver onboarding and emergency alert systems to deliver high safety standards and complete transparency for parents. The platform provides both user-friendly operations and flexible scalability through its robust backend and subscription-based model and partnership and on-demand service options. **Little Riders** establishes itself as a solution that surpasses traditional school transport services by implementing innovative features for both safety and convenience during child commutes. The project stands as a promising investment for both social benefits and business expansion because of its potential success in the developing field of smart transportation.

8. REFERENCES

- 1. NeoTrack:** [Bus GPS Tracker App| School Transportation Tracking System |Neotrack](#)
- 2. Kriyo:** [Kriyo: The All-in-One App for School and Childcare Management](#)
- 3. Wonk:** [Book Verified Tutor for One-on-One Live Classes](#)
- 4. Tracko:** [Tracko School Bus Tracking Solution | School Bus GPS Tracking App |](#)
- 5. VersionX:** [VersionX Innovations - Simplifying Operations](#)
- 6. Survey google form link of Little Riders:** <https://forms.gle/W1isLggwyGTtu3Pu8>

A. APPENDIX

A.1 Logo Design Report:



Figure 7: Company Logo

The Little Riders logo successfully communicates the brand's core values—safety, reliability, and technology-based child transportation—via its design, color, and typography.

1. Greater Meaning Behind Logo Elements:

Red School Van with Happy Children: Symbolizes safety, reliability, and comfort to provide a safe and pleasant ride. The shield symbol identifies the protection and trust that the company provides.

Location Pin Shape: Symbolizes real-time GPS tracking and route optimization to highlight the tech-based approach of the service.

Tagline "Safe Ride for Children": Transparently depicts the firm's mission—protection of children during transport.

2. Colors and Fonts & Their Influence

Red (Van): Is associated with alertness and protection, consonant with the emphasis on child safety.

Blue (Background & Shield): Is synonymous with trust and reliability, qualities that come in handy in a security-focused service.

Purple (Location Pin): Is a color of innovation, coalescing with the utilization of AI for route and real-time tracking optimization.

Green (Grass): Symbolizes growth, care, and nurturing environment for children.

Fonts: The clear and bold "LITTLE RIDERS" guarantees readability and command, with the minimalist style of the tagline adding to friendliness and reassurance.

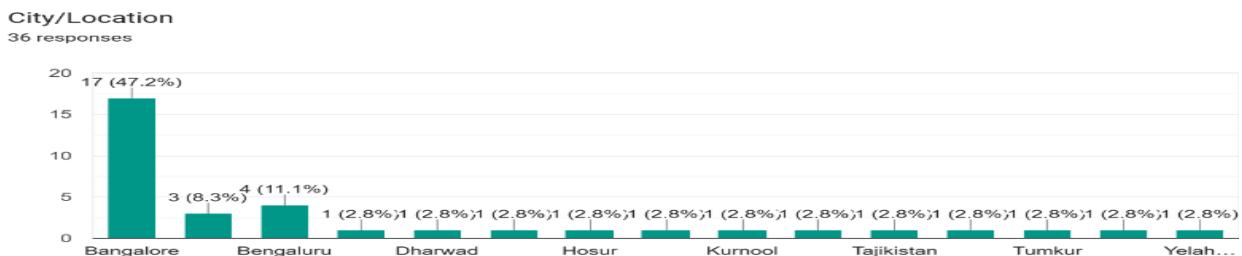
3. How the Logo Conveys the Company's Values

Safety First: The happy children, shield, and tracking pin underscore security.

Technology-Driven: The shield and location pin indicate the application of data engineering, machine learning, and optimization.

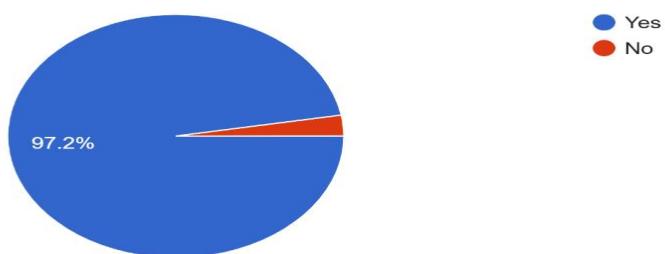
Trust & Reliability: The blue tones and bold font express dependability and parental peace of mind.

A.2 Survey Report:



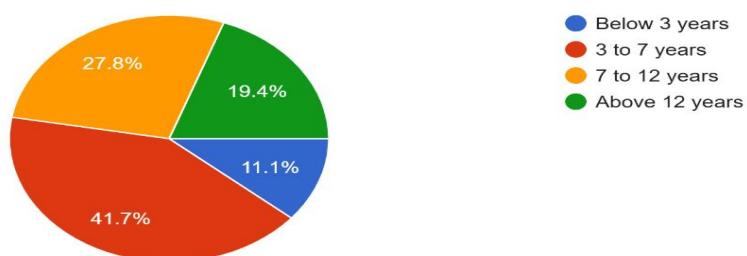
Do you have school-going children?

36 responses

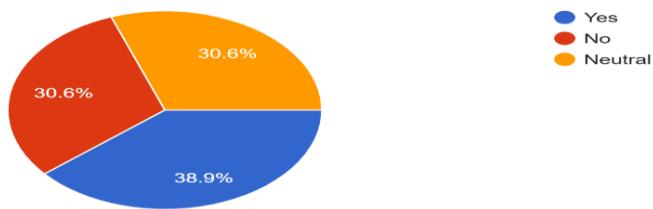


What is the age of your child?

36 responses

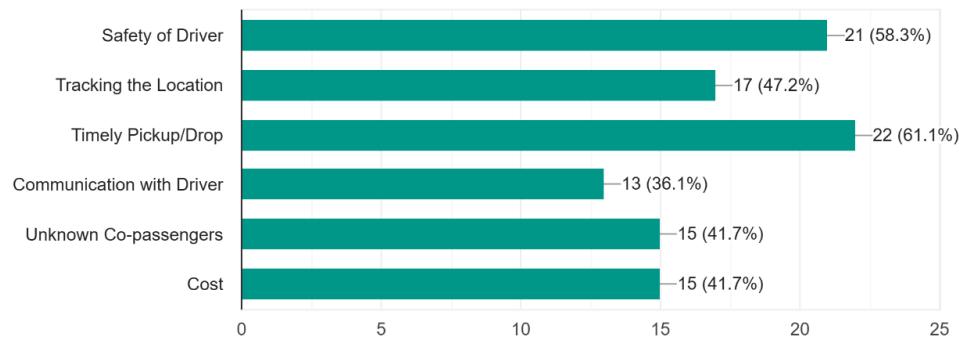


Are you satisfied with the current pick & drop facility?
36 responses

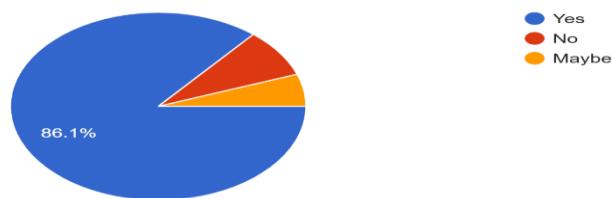


What is your biggest concern during your child's travel ?

36 responses



Would you prefer a safe pick & drop service specially designed for kids?
36 responses



What safety features do you expect in a kids transportation app? (Select all that apply)
36 responses

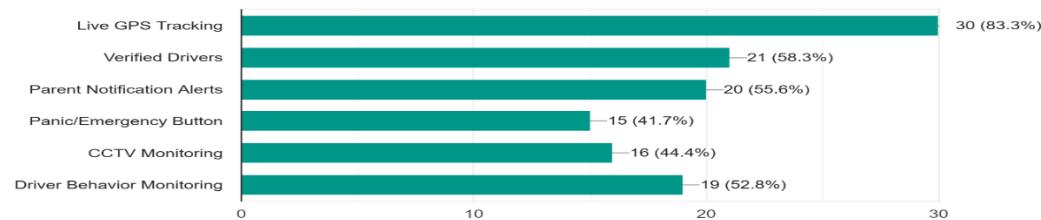


Figure 8: Survey Analysis

A.3 Interview Report:

To better understand the consumers, we carried out interviews with some of the survey participants who expressed a high level of interest in customized mode of pick and drop using google forms. The aim was to derive detailed information on what they expect, their preferences, and their experience with mode of sending their children to school.

A.4 Data collection/Abstraction Report:

Table 1: Comparative Analysis of Little Riders and Existing Traditional School Transport Platforms

Feature	Existing project	Little Riders (Proposed)
GPS Tracking	✓	✓
Powered Safety Alerts	✗	✓
Driver Monitoring	✗	✓
Geofencing & Route Deviation Alerts	✗	✓
Customizable Ride Preferences	✗	✓
Flexible & Affordable Pricing	✗	✓
Childcare & Tuition Integration	✗	✓

Powered Safety Alerts & Smart Tracking

- Basic GPS tracking is given by existing apps.
- Little Rider includes real-time risk identification and geofencing for immediate alerts on unusual stops or route variations. Verified Drivers
- Other apps and websites verify drivers once.

- Little Rider provides ongoing track speed, braking habits, and route following, with maximum safety.
Affordable & Subscription-Based Pricing
- Existing platforms impose varying per-ride fees, whereas Little Rider offers flexible pay-as-you-go and subscription plans at affordable prices for all families.
- Competitors do not integrate with Childcare services, but Little Rider pairs secure transportation with trusted daycare, providing a single platform for busy parents.

Current platforms in India

1. NeoTrack
 - Website: neotrack.ai
 - Overview: Offers school transport solutions, such as real-time GPS tracking, automated attendance, and route optimization to promote student safety and operational efficiency.
2. Kriyo
 - Website: ikriyo.com
 - Overview: A complete school and childcare management app, automating daily operations for schools, preschools, and childcare centres, with features such as attendance monitoring and parent engagement.
3. WONK
 - Website: myedge.in
 - Overview: Tutor search and booking platform that connects students with verified tutors for one-on-one live classes in a range of subjects.
4. Tracko
 - Website: tracko.co.in
 - Overview: Provides GPS-based school bus tracking solutions with parent apps and RFID-based student tracking for safety during transit.
5. VersionX
 - Website: versionx.in
 - Overview: Offers a school bus tracking system with real-time tracking, alerts, and an easy-to-use mobile app for parents.

