



DAYANANDA SAGAR UNIVERSITY



SCHOOL OF
ENGINEERING

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Department of Computer Science And Technology

LITTLE RIDERS

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ABSTRACT

- Ensuring safety of children during transportation is a major concern for parents, particularly in urban areas with increasing security risks. Little Riders is a smart transportation service designed to provide a safe, reliable, and efficient pick-and-drop solution for children.
- This project integrates real-time GPS tracking, verified driver authentication, to enhance the safety and convenience of child transportation.
- The system features live tracking, automated alerts, and emergency response mechanisms,. Verified drivers undergo background checks and training to ensure a secure environment for children.
- Unlike traditional school transport services, Little Riders offers security and convenience for parents. By focusing on safety protocols, and user-friendly features, this project aims to redefine child transportation, ensuring peace of mind for families.

PROBLEM STATEMENT

- In today's fast-paced world, busy parents often struggle to ensure the safe and reliable transportation of their children to and from school, daycare, and extracurricular activities.
- Traditional transport services may lack real-time tracking, verified drivers, and emergency response mechanisms, leading to concerns about safety, punctuality, and transparency
- The absence of a dedicated, child-friendly transportation system increases the risk of unauthorized rides, delays, and safety breaches
- It is crucial to develop a secure, efficient pickup and drop-off solution for children.

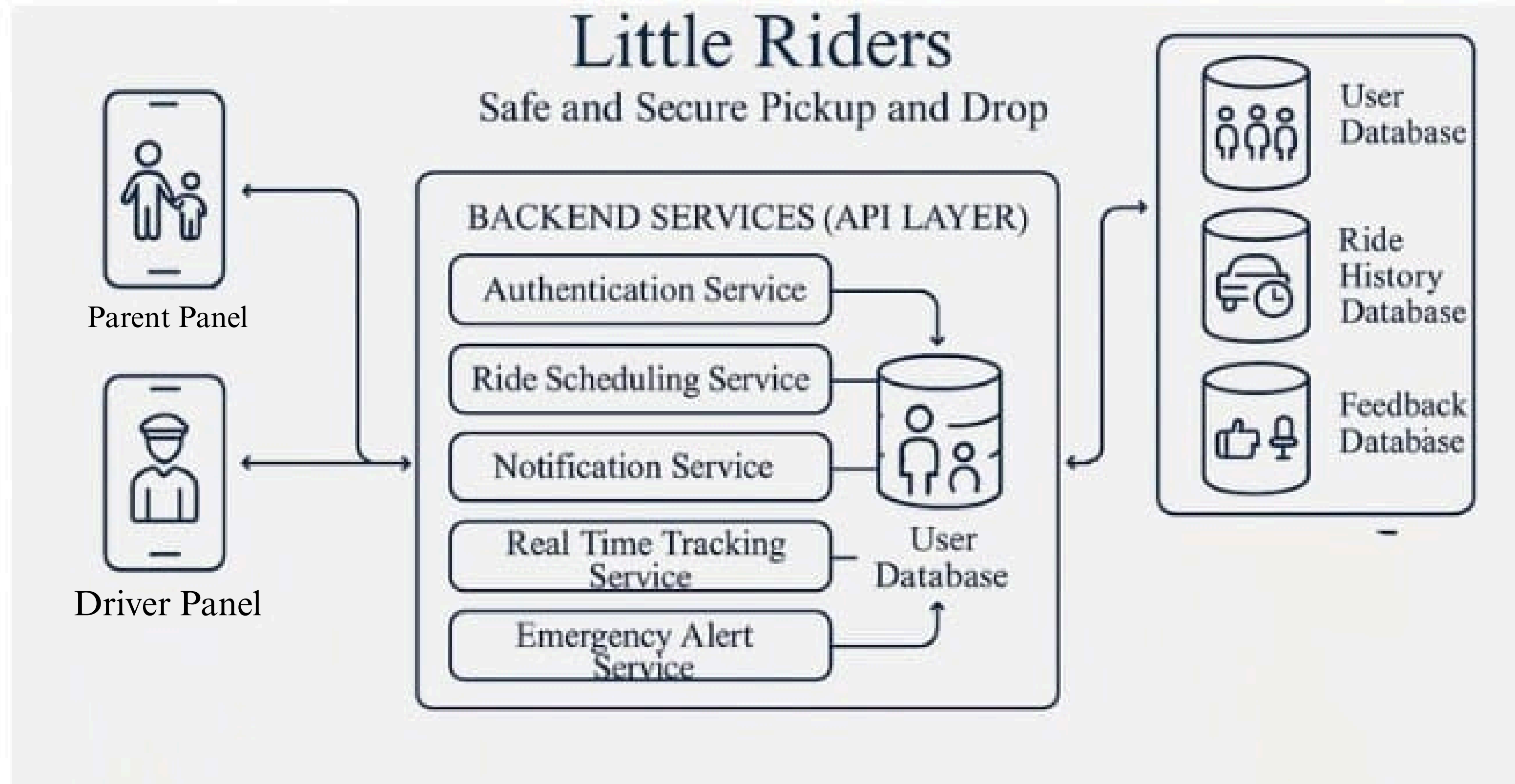
INTRODUCTION

- Ensuring safe and secure transportation of children is growing concern for parents, especially those managing busy work schedules.
- Traditional transportation methods often lack transparency, security, real-time tracking, making it difficult for parents to monitor their child's journey.
- By integrating verified drivers, GPS tracking, emergency alerts, real-time notifications, the system ensures that children travel safely to their destinations.
- Parents can schedule rides, track live locations, and receive instant updates, providing them with peace of mind and a reliable solution for their child's daily commute.
- This project focuses on developing a dedicated and secure pickup and drop service designed specifically for children.

EXISTING WORK VS PROPOSED WORK

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

ARCHITECTURE



SWOT ANALYSIS

Factors	Details
Strengths	<p>Safety-first approach with real-time tracking and verified drivers.</p> <p>Convenience for parents through automated scheduling and monitoring.</p> <p>User-friendly mobile app with live updates and emergency alerts.</p> <p>Reliable service with smart route optimization to reduce delays.</p>
Weaknesses	<p>High initial investment for GPS tracking, driver verification, and app development.</p> <p>Dependency on technology (e.g., network issues could affect real-time tracking).</p> <p>Limited awareness in the market as a new service.</p>
Opportunities	<p>Growing demand for safe and reliable child transportation.</p> <p>Potential partnerships with schools, daycare centers, and tuition services.</p> <p>Scalability to expand services to more cities and integrate additional features like childcare booking.</p> <p>Government support for child safety initiatives.</p>
Threats	<p>Competition from existing school bus services and ride-hailing apps.</p> <p>Regulatory challenges related to child transport safety laws.</p> <p>Trust factor – convincing parents to shift from traditional transport options.</p> <p>Economic factors – pricing constraints for affordability and profitability.</p>

OUTPUTS

Parents Registration

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

sahana

Email:

sahana@gmail.com

Password:

Confirm Password:

Choose Plan:

Basic - ₹299/month

Role:

Parent

Choose Payment Method:

☐ Card ☒ UPI

Enter UPI ID:

lakshmi@upi

Pay Now

☒ Payment Successfull! You can now register.

Register

Drivers Registration

KA01202500001

Aadhaar Number:

11112222333

Vehicle Number:

KA12AN0001

Register

Register for Little Riders

Username:

sana

Email:

sana@gmail.com

Password:

Confirm Password:

Choose Plan:

Basic - ₹299/month

Role:

Driver

DL Number:

KA01202500001

Aadhaar Number:

11112222333

Vehicle Number:

Location(Pick and drop specification)

Welcome, sahana

Step 1: Click on the map or enter an address to set locations

☒ Set Pickup

☐ Set Drop

Pickup Location:

Enter pickup address or click map

Drop Location:

Enter drop address or click map

Pickup Time:

dd-mm-yyyy --:--

Fare: ₹0

Book Ride

Welcome, sahana

Step 1: Click on the map or enter an address to set locations

☐ Set Pickup

☒ Set Drop

Pickup Location:

12.97395, 77.55146

Drop Location:

13.01242, 77.66716

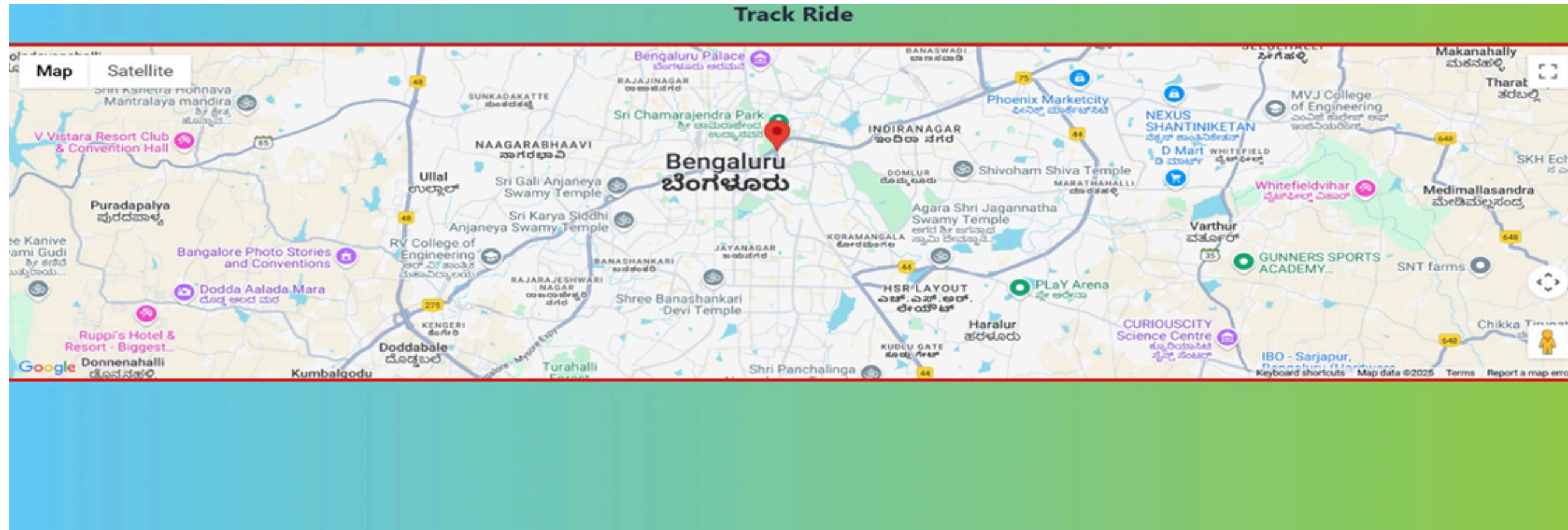
Pickup Time:

27-05-2025 21:27

Fare: ₹342.32

Book Ride

Maps



Ride Confirmation

Your Accepted Rides

Pickup: 12.97395, 77.55146
Destination: 13.01242, 77.66716 at 2025-05-27T21:27
Fare: ₹342.32

Logout

Welcome, Driver sana

Available Rides

Parent: hi
Pickup: 12.98181, 77.56365
Destination: 12.99469, 77.60880
Time: 2025-05-14T20:29
Fare: ₹179.6
📍 Pickup
📍 Drop

Accept Ride

Parent: sahana
Pickup: 12.97395, 77.55146
Destination: 13.01242, 77.66716
Time: 2025-05-27T21:27
Fare: ₹342.32
📍 Pickup
📍 Drop

Accept Ride

Your Accepted Rides

Logout

NOVELTY OF OUR PROJECT

- Little Rider adds geofencing for instant alerts on unexpected stops or route deviations
- Little Rider offers continuous track speed, braking patterns, and route adherence, ensuring maximum safety.
- It provides Driver monitoring feature and also customizable ride preferences.
- It provides the flexibility and affordable prices

CONCLUSION

- **Little Riders** is a thoughtfully designed solution that addresses a growing need among busy parents for safe, reliable, and secure transportation for their children.
- By integrating real-time tracking, verified drivers, emergency alert systems, and seamless communication between parents and drivers, the platform ensures peace of mind and safety as a top priority.
- With its user-friendly interface and robust backend architecture, Little Riders not only streamlines the daily commute for kids but also fosters trust and confidence among families.
- This innovative service has the potential to redefine child mobility, blending technology with care and responsibility.