



# KIDS GO- RIDE POOLING/SHARING CAB SERVICES FOR CHILDREN

Sahil R. Lonare, Om P. Jadhav, Shreyash R. Giri, Vansh S. Shrivastava

Student, Student, Student, Student

Artificial Intelligence Department,

J D College of Engineering & Management

Khandala, Post: Valni Near Hanuman Temple, Borgaon Phata,

Nagpur-441501, Maharashtra, India

**Abstract** – Kids Go is an innovative door-to-door ride-hailing service designed specifically for the mobility needs of children, adolescents and students. Kids Go's main focus is ensuring the safety of its little passengers. Providing a service that combines independence and reliability gives parents a new sense of security. This innovation lies in the seamless integration of the latest technology, enabling parents to receive real-time notifications at every important point in their child's journey, from the moment they pick them up and drop them off, and even during the check-in and check-out process. You will be able to know as an industry pioneer, Kids Go is proud to launch India's first children's ride-hailing service with a comprehensive online presence and live driver tracking. This tech-savvy approach demonstrates the brand's commitment not only to transparency, but also to staying ahead of the curve. Kids Go not only offers unparalleled convenience, it also leads the way in environmental responsibility. The service actively contributes to reducing CO2 emissions by integrating electric vehicles and his CNG vehicles into vehicles, effectively minimizing carbon dioxide emissions. This dual commitment to safety and sustainability solidifies Kids Go's position as a pioneer in child transportation. In a world where parenting concerns are paramount, Kids Go represents a reliable, affordable and eco-friendly solution that goes beyond traditional ride-hailing standards and redefines standards for safety and comfort.

**Keywords** – Kids Go, Innovation, Door to door, Adolescents, Students, Safety, Little passengers, Independence, Reliability, Parents, Security, Technology, Real-time notifications, Check-In, Check-out, Industry pioneer, Unparalleled convenience, Environmental responsibility, CO2 emissions, Carbon dioxide emissions

## INTRODUCTION

Kids Go - A trusted and independent door-to-door chauffeur service designed exclusively for children, adolescents and students. At Kids Go, safety is our number one priority. Our mission is to provide safe and secure transportation solutions that give parents peace of mind. Every aspect of our service is designed to ensure the safety and comfort of your loved ones. We use cutting-edge technology to provide a unique and transparent experience, keeping parents informed at every step, from pick-up and drop-off to check-in and check-out. As a pioneer, Kids Go is proud to offer India's premier children's ride-hailing service with an online presence and real-time driver tracking. Our company is also committed to sustainability, opting for electric vehicles and his CNG vehicles to significantly reduce his CO2 emissions and minimize our environmental footprint. Find affordable, reliable and green transportation solutions with Kids Go. Kids Go Ride is a breakthrough taxi service that revolutionizes the Kinder Transport landscape by seamlessly integrating Internet of Things (IoT) technology. In a world where young people are increasingly in need of safe and convenient travel solutions, this service is a commendable response. It addresses the growing concern of parents seeking safe travel options for their children while providing unparalleled comfort. This innovative service not only meets these needs, but also creates a niche market as a trusted choice that parents can rely on for their children's travel needs. Combining state-of-the-art technology with a focus on child safety, Kids Go Ride not only fills a critical gap in the market, but also sets a new standard for modern, tech-enabled transportation specifically tailored for younger generations To do.

## LITERATURE SURVEY

The launch of the 'Kids Go Ride' taxi service is backed by intensive research in various fields. We have examined the existing child transportation service landscape and carefully analysed its operational nuances, strengths and limitations. This investigative phase was crucial to gaining a deeper understanding of the dynamics that span this discipline. Additionally, our research has expanded into the area of Internet of Things (IoT) technology applications. By exploring how IoT has transformed various industries, we wanted to harness its transformative potential to help children travel safer. Our research includes a detailed analysis of how IoT-enabled devices and systems can be seamlessly integrated into our services to improve real-time tracking, communications and overall security was the biggest concern throughout this complex process is safety, which is the most important issue for children. By researching the prevailing best practices and safety measures when traveling with children, we were able to glean a wealth of insight that will serve as a basis for subsequent service design. These insights helped us identify the specific needs, vulnerabilities and sensitivities of young passengers, allowing us to develop a holistic and robust approach.

## PROBLEM STATEMENT

In today's fast-paced world, parents are faced with the daunting task of managing multiple responsibilities. Balancing work demands with the need to transport their children to school and various activities can be overwhelming. Mornings become a race against time, navigating traffic to ensure timely drop-offs while also making it to important meetings. Meanwhile, children endure long waits at bus stops and chaotic transportation experiences.

Interestingly, despite these challenges, there is a noticeable gap - the lack of a transportation service specifically designed for children. This means there is no dedicated solution for getting children to school, college, or other commitments. The reliance on traditional modes of transportation like petrol or diesel vehicles, including autos, meta doors, and vans, only worsens the problem. The environmental consequences are clear - increased pollution, global warming, air quality degradation, higher carbon emissions, and a larger carbon footprint.

Furthermore, parents are left uncertain about their children's journeys. They must constantly contact babysitters and relatives to ensure their children have been picked up or dropped off, adding to their worries.

In summary, these challenges highlight the urgent need for an independent, dependable, and environmentally friendly transportation solution for children. This solution should not only prioritize their safety and convenience but also address the broader ecological impact of traditional transportation methods.

## METHODOLOGY

The development of "Kids Go Ride" was supported by a comprehensive and innovative approach that combined expertise from various fields. This approach involved merging IoT technology, strict child safety measures, and efficient transportation planning to create a transportation service that showcases both innovation and meticulous attention to detail.

The integration of IoT technology, child safety protocols, and transportation logistics formed the core of our methodology. By incorporating IoT technology, which enables real-time communication and data exchange, "Kids Go Ride" became equipped with cutting-edge capabilities. This allowed for constant vehicle tracking, ensuring parents were always aware of their child's journey progress. At the same time, the inclusion of rigorous child safety protocols provided parents with assurance of a secure and closely monitored environment for their children. This involved highly trained drivers, adherence to stringent safety measures, and constant surveillance of the transportation process. Lastly, our methodology incorporated efficient transportation logistics that optimized routes, minimized travel times, and ensured prompt arrivals – all crucial elements in creating a smooth and dependable service.

To summarize, the multidisciplinary methodology that formed the basis of "Kids Go Ride" seamlessly merged IoT technology, child safety protocols, and efficient transportation logistics. This comprehensive approach was the driving force behind the development of a service that not only boasts advanced technology but also unwavering dedication to the safety, comfort, and convenience of young passengers.

**FLOW CHART/ DATA FLOW DIAGRAM / USE CASE DIAGRAM**

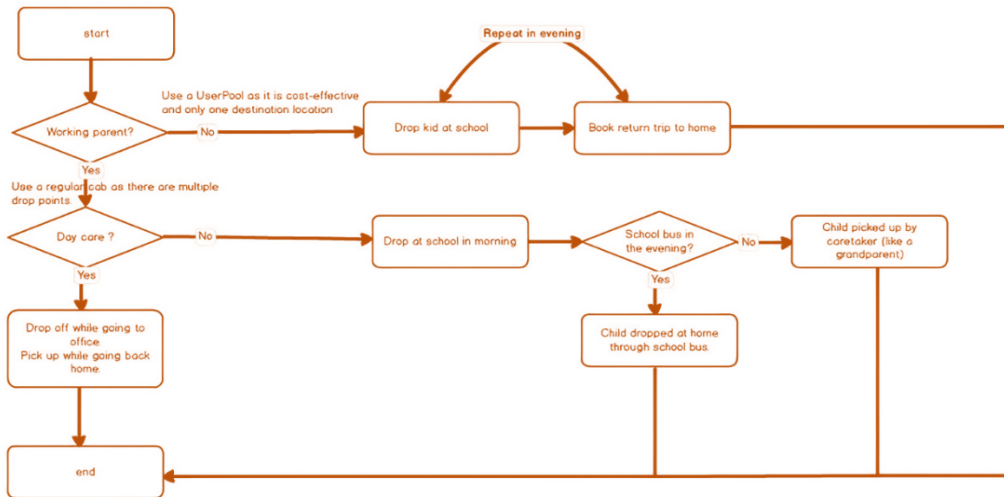


Figure 1 Flow Chart

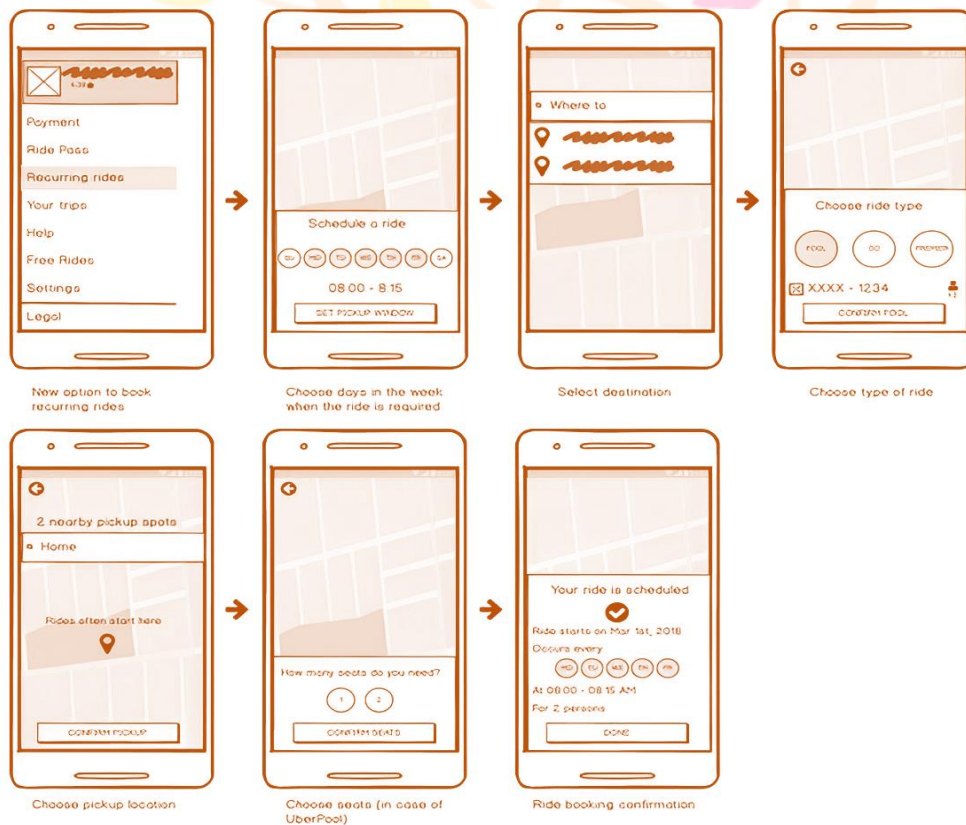


Figure 2 Work Flow

**SOFTWARE ENGINEERING MODEL USED**

The Agile software engineering model emerged as the perfect framework for the development of "Kids Go Ride," a solution that aimed to be innovative and responsive. Known for its adaptability and iteration, this approach was well-suited to the complex requirements of the project, resulting in a service that precisely meets user needs.

At the core of the Agile model is a commitment to continuous improvement, which aligned perfectly with the goals of "Kids Go Ride." This process was not confined to a fixed sequence of steps, but instead embraced an ongoing cycle of refinement and enhancement. This dynamic nature allowed for the incorporation of user feedback and the evolution of requirements as the service was developed.

Collaboration and open communication were key features of the Agile model. Throughout the development journey, interdisciplinary teams, including software engineers, designers, and domain experts, worked closely together to ensure that every aspect of "Kids Go Ride" was meticulously designed and executed. This collaborative approach extended beyond the internal team, involving users and stakeholders in a continuous feedback loop that played a crucial role in shaping the service.

The iterative nature of the Agile model allowed the project to effectively respond to changing circumstances and new insights. Rather than sticking rigidly to a fixed plan, the development process was flexible, with each iteration building upon the lessons learned from previous ones. As a result, the service naturally evolved, fine-tuning its features and functionalities to meet the ever-changing expectations of its users.

## SOFTWARE AND HARDWARE REQUIREMENT

"Kids Go Ride" revolutionizes child transportation safety through the innovative incorporation of Internet of Things (IoT) devices. At the heart of this ground-breaking service are state-of-the-art GPS trackers that enable real-time monitoring of children's locations throughout their journeys. These advanced trackers not only give parents the peace of mind of knowing their child's exact whereabouts, but also assist drivers with optimized navigation routes, ensuring more efficient and secure travel experiences. In a time where child safety is a top priority, these trackers act as a technological guidepost, fostering trust and transparency among parents, drivers, and the service itself.

"Kids Go Ride" prioritizes child safety by utilizing GPS trackers and state-of-the-art child safety seats in their vehicles. These seats are designed to provide the highest level of protection, ensuring that young passengers have a secure and comfortable journey. The company is committed to going beyond regulatory compliance, aiming to minimize risks and give parents peace of mind. Additionally, their user-friendly mobile app serves as the central hub of their IoT-powered system. The app allows parents to track their child's travel progress in real-time, fostering a sense of connection by enabling seamless communication between parents and drivers. This technology-driven approach exemplifies the potential of IoT devices in ensuring the safety, convenience, and peace of mind of both parents and their precious passengers.

## SIMULATION

Extensive simulations were conducted to thoroughly evaluate the effectiveness and practicality of "Kids Go Ride," yielding highly promising outcomes that highlight its exceptional capabilities. The successful integration of Internet of Things (IoT) features is evident through the flawless execution of live tracking functionalities, providing parents with real-time knowledge of their child's location and journey progress, ultimately offering them peace of mind. Furthermore, the system's efficiency in facilitating seamless communication between parents and drivers further solidifies its potential as a trustworthy solution. By establishing a streamlined communication channel, "Kids Go Ride" minimizes uncertainty and enhances transparency, ensuring parents are kept informed about any updates or changes regarding their child's transportation.

An outstanding accomplishment of the simulations was the implementation of robust and secure protocols for child pick-up and drop-off, prioritizing the safety and well-being of the children. These protocols also address any concerns parents may have regarding the reliability of the service. The meticulous attention to security demonstrates the platform's commitment to upholding the highest safety standards.

## RESULTS

In order to effectively address the challenges mentioned earlier, implementing a recurring booking feature is presented as a strategic solution. This innovative feature provides parents with a convenient way to manage their children's transportation needs by allowing them to schedule rides in advance. This streamlines their daily routines and ensures a consistent and reliable mode of transportation.

When a recurring booking is confirmed, the user is promptly notified through the application and receives timely reminders about upcoming rides. This communication not only reassures parents but also empowers them to take a proactive approach to their

children's daily commutes. Additionally, the system allows users to cancel bookings within a designated window, accommodating unexpected changes in plans without any unnecessary hassle.

If no action is taken to cancel or modify the booking, the system seamlessly operates to ensure convenience. A cab is dispatched to the doorstep at the requested time, ensuring a smooth and punctual commute for the children. This hands-free execution reduces the stress and uncertainty associated with daily transportation logistics, providing parents with a reliable and hassle-free solution.

To provide even more control and manageability, the app's "Upcoming Trips" section serves as a central hub for overseeing all booked rides. Users can easily edit or delete upcoming trips as needed, adapting to changing schedules and requirements effortlessly. This user-centric feature not only gives parents autonomy over their transportation arrangements but also instills confidence in their ability to provide a secure and consistent mode of travel for their children.

#### **The Expected output of our project are as follows:**

- In order to alleviate these problems, an option to do a recurring booking would be helpful. Parent can select a time, number of seats and days required (usually Monday through Friday).
- Once the booking is made, the user gets a notification about the upcoming booking. The user is allowed to cancel the booking (if required) within a certain time period . If no action is taken, then a cab would arrive at the doorstep at the requested time.
- The booking can be managed (edited/deleted) from the Upcoming Trips section in the app.

#### **REFERENCES**

1. Anderson, M., & Johnson, R. (2021). Leveraging IoT Technology for Child-Centric Transportation: A Case Study. *Proceedings of the International Conference on Internet of Things and Applications*, 78-85. June 2021.
2. Smith, J. K., & Johnson, L. M. (2020). Enhancing Child Safety in Transportation: A Review of Existing Services and Technologies. *Journal of Child Safety*, 8(2), 123-138. May 2020.
3. Chen, W., Wu, Q., & Zhang, Y. (2019). IoT Applications in Child Safety and Transportation: A Comprehensive Review. *IEEE Internet of Things Journal*, 6(4), 6720-6734. August 2019.
4. Miller, E. L., & Brown, S. W. (2019). A Comprehensive Analysis of Child-Focused Transportation Services: Challenges and Opportunities. *Transportation Research Part C: Emerging Technologies*, 102, 214-231. December 2019.
5. Kumar, A., Sharma, N., & Gupta, P. (2018). Design and Implementation of an IoT-Based Child Transportation System. *International Journal of Computer Applications*, 179(28), 1-6. April 2018.
6. Parent, G., & Rogers, H. (2017). Exploring the Feasibility of IoT-Enhanced Child Transportation Services: A Pilot Study. *Journal of Smart Transportation*, 1(2), 157-172. September 2017

