

PROJECT PROPOSAL



School Bus Tracking

A Smart Bus Tracking System for Seamless School Transportation.



Designed & Developed by

techtsy
land of technology



Know About Us

We consider ourselves as techlosophers. At Techtsy we turn your tech ideas into realities. We aim to create actionable tech insights and practical tools to reduce barriers to entrepreneurs through cutting edge technologies, cost effective solutions and very effective support.

We're a small, flexible and laden with the creative ideas that are just on the finger tips and are ready to take shape. We craft simple and functional web & mobile apps. We simply love developing and designing. Creativity is a part of our culture and we make sure to provide our team the best and most creative environment possible.

What We Made



Befoodie
Food Ordering App



YouFIT
Fitness Tracking App



PoolCABs
Ride Sharing App



My Pasar Borong
Grocery Delivery App



Nikahh
A Marketplace App

**& 10+ Startup
Ideas App!**

ABOUT

SCHOOL BUS TRACKING SYSTEM

Making School Bus Safe and Secured for Kids

Technologically, it has made our lives much easier, and it is being used to ensure the safety and efficiency of transportation. But when it comes to school transportation, most parents remain worried during commuting time. To deal with this issue, we have developed a School Bus Tracking System. With this system, schools can monitor each bus's precise location in real-time, providing administrators, parents, and drivers with invaluable insights and control.

By leveraging advanced GPS technology and intuitive software, the system enhances student safety by enabling timely pickups and drop-offs, while also providing instant alerts in cases of emergencies or delays. Moreover, it optimizes operational efficiency by streamlining routes, reducing fuel consumption, and offering comprehensive data analytics for informed decision-making. Embracing this innovative solution allows schools to prioritize student safety and enhance overall transportation management, fostering a more secure and efficient educational environment.



SCHOOL BUS TRACKING

CURRENT CHALLENGES

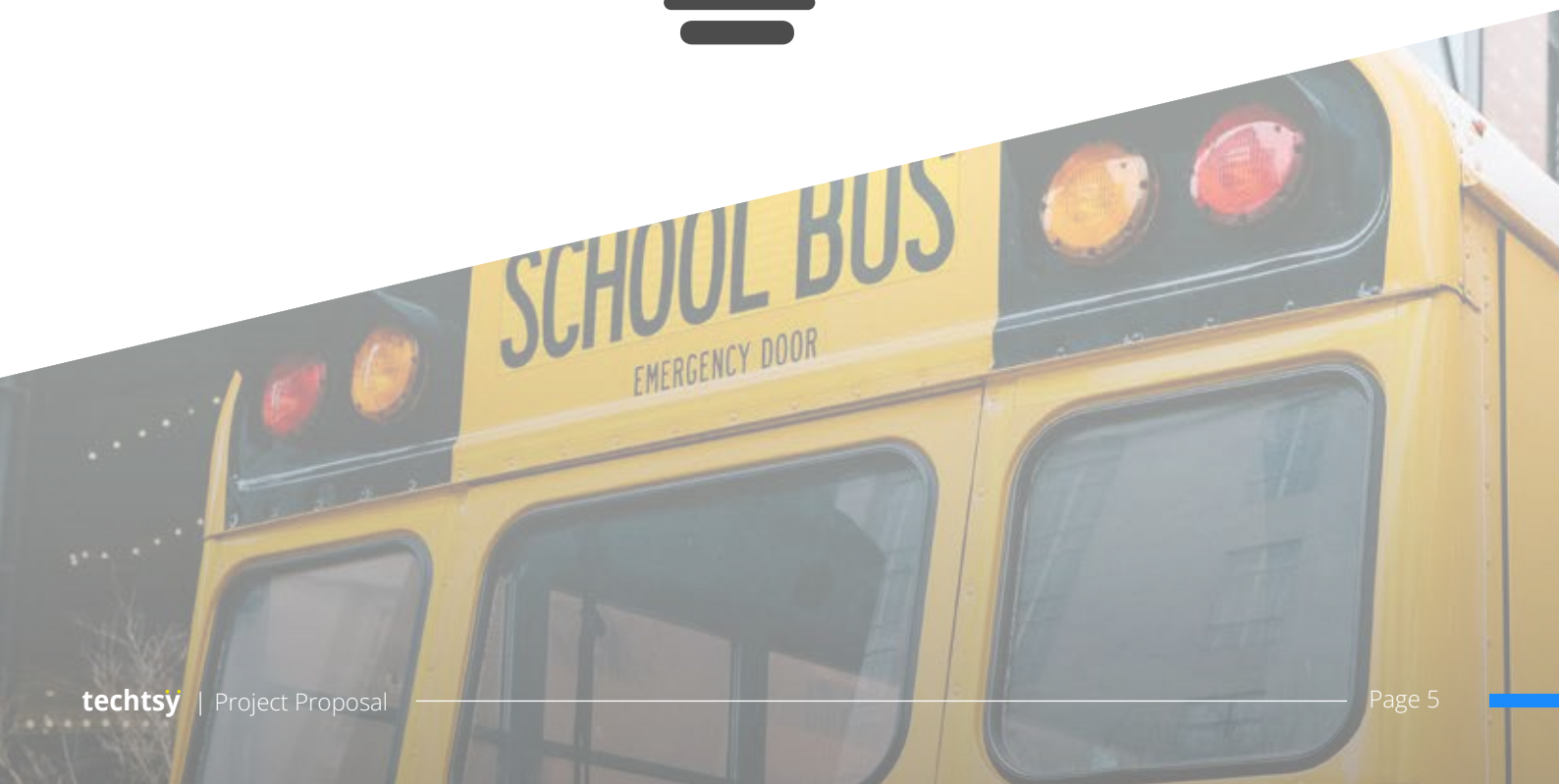
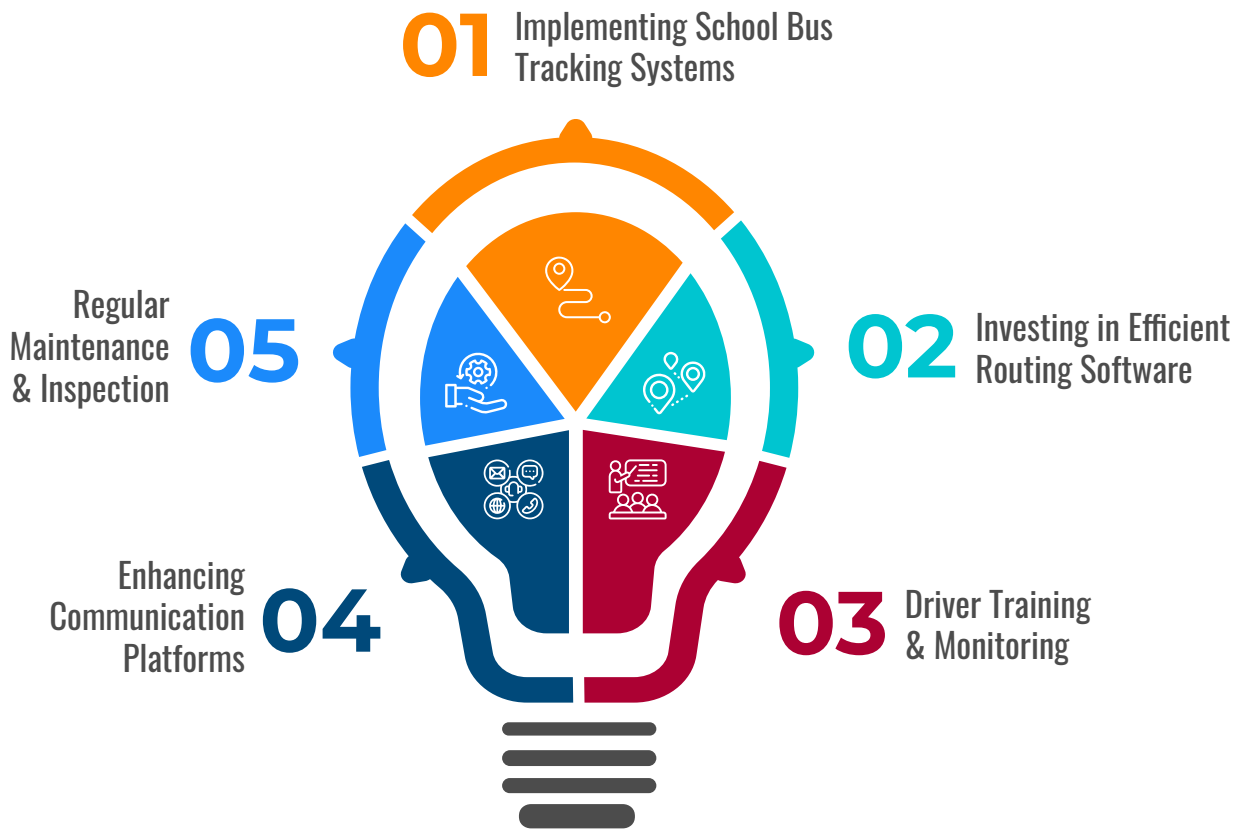
The Challenges of Operating School Transportation for School Authorities.

- Ensuring Student Safety and security
- Route Optimization
- Communication and Coordination
- Adapting to Changing Needs
- Ensuring Compliance
- Assuring parents about children's safety



SOLUTIONS SCHOOL BUS TRACKING

Revolutionize School Transportation with Next-Gen Tracking and Management System



OUR MISSION SCHOOL BUS TRACKING

Empowering School Transportation with Real-Time Monitoring and Efficiency

Our mission is to enhance student safety and optimize transportation efficiency through our School Bus Tracking System. We are committed to providing real-time monitoring, efficient routing, and transparent communication to ensure peace of mind for parents, administrators, and drivers alike.



WHY NEED A SCHOOL BUS TRACKING SYSTEM

Our School Bus Tracking System ensures real-time monitoring for peace of mind and efficient transportation of kids to their safest place to their home.

1 ➤ Enhanced Safety

Real-time tracking ensures students' safety by providing instant alerts in emergencies and ensuring timely pickups and drop-offs.

2 ➤ Efficiency

Optimized routes minimize travel time, reduce fuel consumption, and streamline operations.

3 ➤ Transparency

Parents and administrators gain peace of mind with visibility into bus locations and movements.

4 ➤ Communication

Parents and administrators gain peace of mind with visibility into bus locations and movements.

5 ➤ Cost Savings

Efficient routing and reduced idle time result in lower operational costs over time.

6 ➤ Compliance

Ensures compliance with safety regulations and standards through monitoring and reporting features.

7 ➤ Data-driven Decisions

Comprehensive analytics enable informed decision-making for scheduling, maintenance, and resource allocation.

Overall, a School Bus Tracking System improves safety, efficiency, and communication, making it an essential investment for schools and parents alike.

WHY SCHOOL BUS TRACKING

THE ULTIMATE SCHOOL BUS TRACKING SYSTEM FOR MAXIMUM SECURITY PROTOCOLS

Experience the ultimate peace of mind with our cutting-edge bus tracking system and make your students safe and guardians' tension-free.

1 ➤ Customizable Alerts

Tailor alerts to your needs, from arrival notifications to emergency alerts, ensuring you're always in the know.

3 ➤ Parent Portal

Empower parents with access to bus locations, arrival times, and notifications, fostering transparency and confidence in the transportation process.

5 ➤ Comprehensive Reporting

Access detailed analytics on bus performance, driver behavior, and route efficiency for data-driven decision-making and continuous improvement.

7 ➤ Driver Accountability

Monitor driver behavior, adherence to schedules, and compliance with safety protocols, ensuring accountability and professionalism at all times.

2 ➤ Live Map View

Track buses in real-time on a user-friendly map interface, providing instant visibility and peace of mind.

4 ➤ Efficient Routing

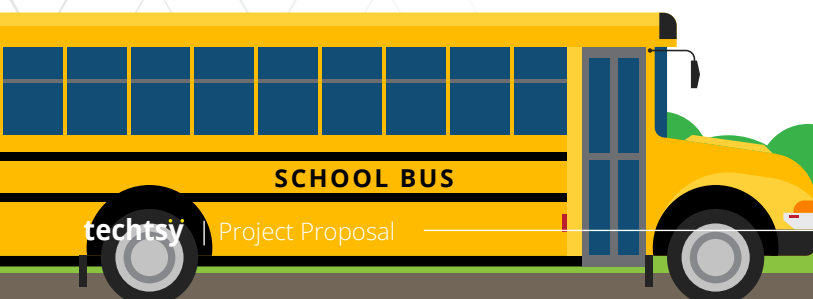
Optimize routes to minimize travel time, reduce fuel consumption, and enhance operational efficiency, saving both time and money.

6 ➤ Seamless Integration

Easily integrate with existing school systems and communication platforms, ensuring smooth implementation and user adoption.




8 ➤ Live Chatting Option

Engage in real-time communication with our built-in chatting system, fostering collaboration and seamless coordination for optimal transportation management.



SYSTEM DELIVERABLES SCHOOL BUS TRACKING



-  Driver Mobile App
-  Parents Mobile App
-  Admin Dashboard

DRIVER APP FEATURES SCHOOL BUS TRACKING

EMPOWER YOUR SCHOOL BUS DRIVERS FOR SAFE JOURNEYS

Our School Bus Tracking System is equipped with a comprehensive Driver App for real-time navigation, student management, and instant communication, ensuring safe and efficient school transportation.

1 ➤ Real-time Navigation

Turn-by-turn directions guide drivers along optimized routes, minimizing travel time and ensuring timely pick-ups and drop-offs.

3 ➤ Student Management

Easily view student lists, track attendance, and manage boarding and alighting, fostering a smooth and organized journey.

5 ➤ Emergency Alerts

Instantly receive alerts for emergencies or delays, enabling quick response and ensuring student safety.

2 ➤ Communication Tools

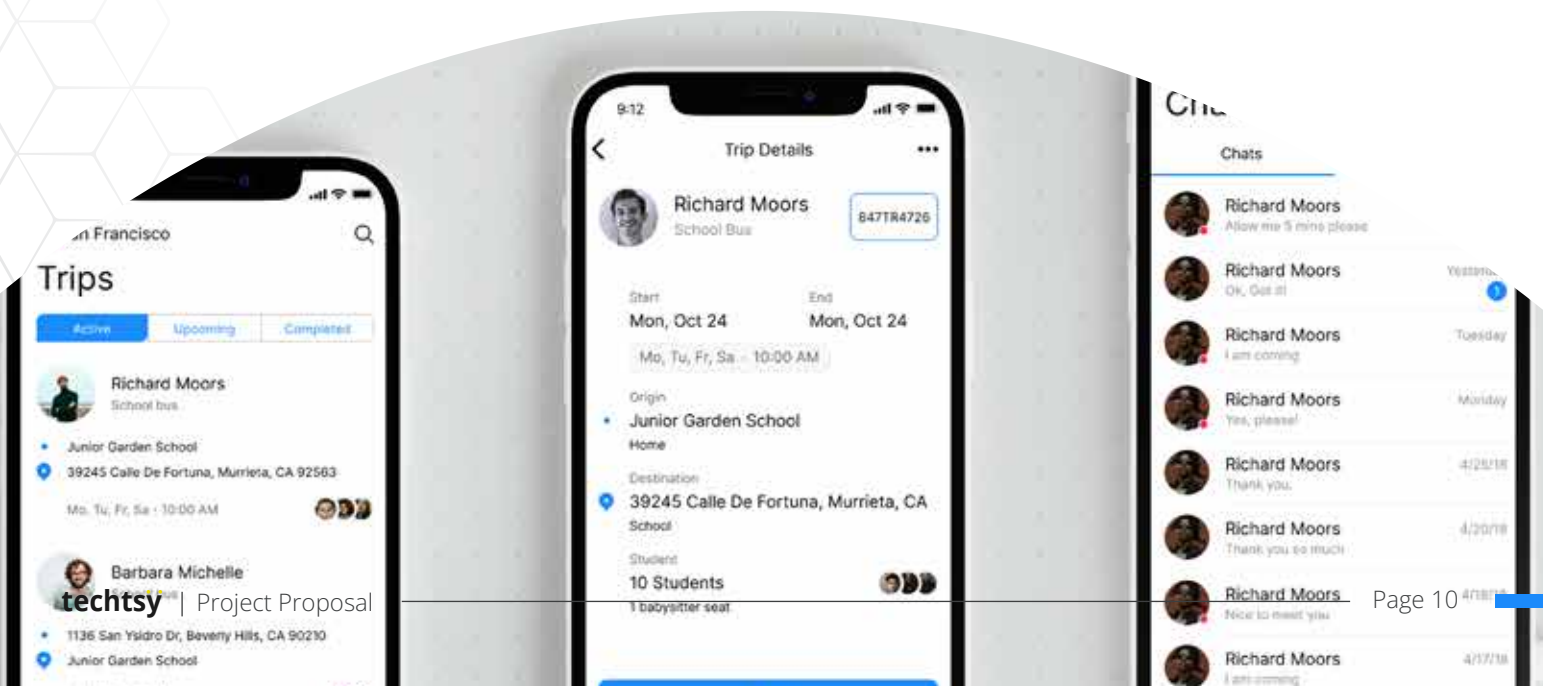
Seamlessly communicate with parents, school administrators, and dispatchers via built-in messaging features, enhancing coordination and transparency.

4 ➤ Driver Performance Insights

Access performance metrics and feedback to improve driving efficiency, adherence to schedules, and overall professionalism.

6 ➤ Offline Mode

Maintain functionality even in areas with poor network coverage, ensuring uninterrupted service throughout the journey.



SCHOOL BUS TRACKING

PARENTS APP FEATURES

EMPOWERING PARENTS FOR PEACE OF MIND WITH SCHOOL BUS TRACKING

School Bus Tracking System provides parents with an intuitive and dedicated app equipped with real-time bus tracking to ensure safety, security and confidence in their child's transportation.

1 ➤ Real-time Bus Tracking

Track your child's bus in real-time on an interactive map, knowing their exact location and estimated arrival time.

2 ➤ Customizable Alerts

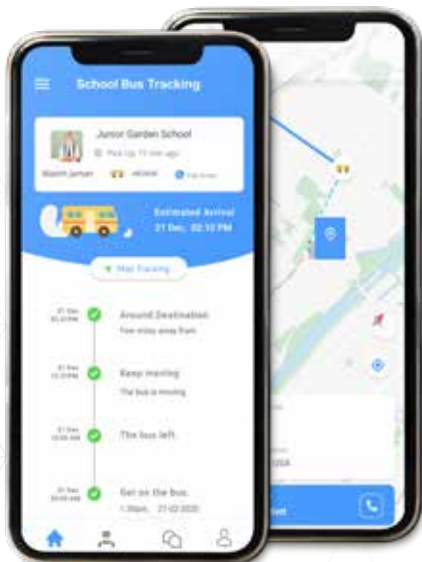
Receive notifications for bus arrival, delays, or emergencies, keeping you informed and prepared at all times.

3 ➤ Instant Communication

Communicate directly with drivers or school staff for updates or concerns, fostering collaboration and trust.

4 ➤ Student Safety Features

Access emergency contact information and safety protocols, ensuring your child's well-being during transit.



5 ➤ Multiple Child Support

Monitor the transportation of multiple children from a single app, streamlining management for busy parents.

6 ➤ Historical Tracking

Review past bus routes and locations for peace of mind and reference, ensuring a consistent and reliable service.

SCHOOL BUS TRACKING

ADMIN PANEL FEATURES

1 ▶ Streamline School Transportation Management

School Bus Tracking System offers school administrators a comprehensive panel for route optimization, driver management, real-time monitoring, and data analytics, revolutionizing school transportation management.

2 ▶ Route Optimization

Easily create and optimize bus routes based on student locations, traffic patterns, and other variables to ensure efficient transportation.

3 ▶ Real-time Tracking

Monitor the exact location and movement of buses in real-time on an interactive map for better oversight and management.

4 ▶ Driver Management

Manage driver assignments, schedules, and performance metrics, including attendance, driving behavior, and adherence to safety protocols.

5 ▶ Alerts and Notifications

Receive instant alerts for emergencies, delays, or deviations from planned routes, enabling quick response and proactive management.

6 ▶ Geofencing

Set virtual boundaries for bus routes or specific locations and receive notifications when buses enter or leave these designated areas.

7 ▶ Parent Communication

Facilitate communication between parents and drivers or administrators through the admin panel, providing updates on bus status and addressing concerns promptly.

ADMIN PANEL FEATURES

8 ➤ Data Analytics

Access comprehensive analytics and reporting tools to track key performance indicators, such as on-time performance, fuel efficiency, and student attendance.

9 ➤ Maintenance Scheduling

Schedule and track routine maintenance tasks for buses, ensuring they remain in optimal condition and minimizing breakdowns or delays.

10 ➤ Compliance Monitoring

Monitor compliance with regulatory requirements and safety standards, such as driver qualifications, vehicle inspections, and route adherence.

11 ➤ Integration Capabilities

Seamlessly integrate the admin panel with existing school management systems or third-party applications for streamlined data sharing and workflow management.



SCHOOL BUS TRACKING

ADVANCED FEATURES

SOME ON-DEMAND ADVANCED FEATURES WE CAN OFFER

Depending on requirement we also provide some advanced and special features for this system to make the best out of it.

1▶ Predictive Analytics

Utilizing historical data and machine learning algorithms to predict future bus arrival times, helping improve scheduling accuracy and reduce waiting times.

2▶ AI-based Routing Optimization

Using artificial intelligence to continuously optimize bus routes in real-time based on factors like traffic conditions, weather, and passenger demand, maximizing efficiency.

3▶ IoT Integration

Integrating Internet of Things (IoT) devices such as sensors and cameras on buses to collect data on passenger occupancy, temperature, and other environmental factors for enhanced monitoring and management.

4▶ Biometric Authentication

Implementing biometric authentication systems for drivers to ensure only authorized personnel operate the buses, enhancing security and accountability.

5▶ Voice Recognition

Incorporating voice recognition technology into the system, allowing drivers to perform tasks hands-free, such as updating routes or reporting incidents, improving safety and efficiency.

6▶ Blockchain-based Data Security

Employing blockchain technology to secure data transmission and storage, ensuring the integrity and confidentiality of sensitive information such as passenger records and payment transactions.

TECHNOLOGY STACK SCHOOL BUS TRACKING

This application is built with Kotlin (Android), Swift (iOS), React (Front End) and Django (Backend).



N. B. Based upon request we can provide the solution also in flutter (mobile app) and in node.js (Backend).



Thank You!



School Bus Tracking

A Smart Bus Tracking System for Seamless
School Transportation.



Found It Helpful?

Get in Touch

Colony@KLCC 6, Jalan Kia Peng, Kuala Lumpur,
50450 Kuala Lumpur, Wilayah Persekutuan Kuala Lumpur

Email: info@techtsy.com

Phone: +60 17-363 9058

Copyright © 2025 Techtsy | All Rights Reserved

Designed & Developed by

techtsy

land of technology

WWW.TECHTSY.COM