

ABSTRACT

UrbanRoutez is a project aimed at improving urban public transportation by addressing common issues like unpredictable wait times, inaccurate route information, and a lack of coordination. The current state of public transportation apps is fragmented and outdated, leading to dissatisfaction among commuters. UrbanRoutez seeks to change this by offering a feature-rich mobile app. This project allows users to easily search for bus routes, stops, and destinations. It displays bus schedules with departure times, frequencies, and variations like weekends and holidays. Real-time bus tracking is available on a map, along with estimated arrival times. Users receive notifications about delays or schedule changes. Detailed information about each bus, including type, fares, seating capacity, and amenities, is provided. This work also helps with route planning by suggesting the fastest and most convenient options based on real-time data, including alternative routes and transfer points. Seamless communication between commuters and transit agencies is facilitated, with emergency contacts and safety information accessible. The project delivers a fully functional Android application developed in Kotlin. It integrates Firebase to store and manage dynamic data such as live GPS locations, transit schedules, and user feedback. This ensures that commuters have access to accurate and up-to-date information, improving their overall commuting experience.