

Case Study: Real-time Mobile Tracking Platform for Armed Custody

1 Introduction

A private security firm approached a software development company to develop a real-time mobile tracking platform that enables the administration of armed custody, GPS tracking in real-time, and user-defined routes, with alerts for unexpected route changes. The platform should also generate reports and summaries for clients.

1 Objective

The primary objective of the project was to develop a mobile tracking platform that can be used by private security firms to track armed custody and monitor the activities of their security personnel. The platform should be reliable, easy to use, and provide real-time data to clients.

2 Technology Used

The development team used React Native, Signalr, Google Maps API, Google Play services Location API, Firebase Cloud Messaging API, Backend ASP.NET Core MVC, Frontend Razor, Entity Framework Core, Identity Framework, Bootstrap, MySQL, and JWT to develop the platform.

3 Solution

The development team started by designing the system architecture, wireframes, and user interfaces. The team used React Native to build the mobile application and Google Maps API for mapping and location services. The team used SignalR to establish a real-time connection between the server and clients for sending and receiving location updates.

The team used ASP.NET Core MVC for the backend and Entity Framework Core for data management. Identity Framework was used for authentication and authorization, while JWT was used for token-based authentication. The team used Firebase Cloud Messaging API for push notifications, and Bootstrap for frontend design and layout. MySQL was used for database management.

The platform allows administrators to add armed custody and define routes that security personnel should follow. The platform sends alerts to administrators if there are unexpected route changes or if a security officer deviates from the assigned route. The platform generates real-time location updates that are displayed on a map, allowing administrators to monitor the

activities of their security personnel in real-time. The platform also generates reports and summaries that can be shared with clients.

4 Conclusion

The development team delivered a real-time mobile tracking platform that met the client's requirements. The platform is easy to use, reliable, and provides real-time data to clients. The platform has the potential to revolutionize the private security industry by providing a modern solution to track armed custody and monitor the activities of security personnel.