

Features	Final Product	Prototype
Data Miner		
Traffic Conditions	It will retrieve real-time travel information from drivers using the app.	Simulated driver metadata to use in analysis.
GUI		
Login	Allows user entry of authentication credentials.	Restricted to specific test users.
New User	Allows a user to create an account and select a membership.	Not implemented because of scope.
Settings	Allows user to alter application settings and options.	Not implemented because of scope.
Trip Editing	Allows user to specify a new route to be saved or modify an existing route.	Restricted to limited test area.
Route Tracer	Program function to track a route to be saved as it is driven by the user.	Not implemented because of scope.
Travel Map	Non-interactive screen that displays current traffic conditions while driving.	This is implemented.
End of Trip	Presents statistics about last trip and any appropriate options to edit the stored route.	This is implemented.
Simulation Console	Not implemented in Final Product.	Demonstration interface for simulated driving scenarios.
Virtual Checkpoints		
GPS Latitude/Longitude Coordinates	Associates GPS coordinates along roads with checkpoints.	Simulated coordinates for hand-selected checkpoints.
Driver Acknowledgement	Recognizes drivers passing GPS location (checkpoint) as an event.	This is implemented on simulated checkpoints.
Data Exchange	passed / Download necessary traffic	checkpoints.
Database		
Driver Profile Database	Stores customer account information, credentials, and payment method.	This is implemented with test users.
Virtual Checkpoint Database	Stores checkpoint coordinates, current traffic status, and historical statistics.	This is implemented with simulated checkpoints.
Speed Limit Database	Stores static information on speed limits for public access.	This is implemented.
Algorithms		
Aggregate Speeds	Analyzes and filters driver inputs to determine current traffic speed.	This is implemented.
Checkpoint Allocation	Initial assignment of GPS coordinates to initialize checkpoints.	Not implemented because of scope.
Checkpoint Reallocation	Redistribution of checkpoints along roads as determined by current checkpoint statuses and historical patterns.	Only implemented on specific driving scenarios.
Route Analysis	Calculate delays, outputs alternate route suggestions	This is implemented.
Next Checkpoint ETA	Estimates time to arrival at next checkpoint from client side for GPS/Data/Battery management.	This is implemented.

Route Matcher	Determines the closest Virtual Checkpoint or set of checkpoints to a given GPS coordinate or set of coordinates.	This is implemented.
Blockage Finder	Determines points on roads where traffic flow is completely blocked.	This is implemented.
Driver Generator	Not implemented in Final Product.	Randomly generates virtual drivers with speeds for testing purposes.