Road Trip Planner - An Applied Problem

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Author’s Note

I propose to build an application that would present users with a superior user interface and will try to leverage different APIs available for a superior user experience.

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In our previous exercises we reviewed different applications already available in the market, while some of the applications are downright unappealing some had some pretty good and cool features. We have established that we want to deliver an application that would present the user with all sorts of tools required for planning a road trip, while not overwhelming the user and providing them with a fun solution.

Our approach will be primarily focused on leveraging different APIs freely available by different services providers. Our solution to providing a great app for road trip planning will be to package all the services and information in a way that would be quick and customized to the needs of the user. Most applications available in the market are very focused on their approach of what they offer or specialize in. We realize user needs a concise one stop shop where they can access all their requirements.

Another privacy and info security concern that has come up in the wake of Cambridge Analytica and Facebook user data. One of the major issue that has been come to forefront and expressed by publics opinion is the user privacy, public is getting more aware and concerned about their privacy, for that reason our application will not create username and passwords and will not try to capture user details that could impact their privacy. So instead of trying to offer them a slightly modified solution our approach is to bring all the different services to them at one platform. Our application will try to provide a better alternative to applications available in the market by address the following parameters

1. Presentation and User Interface – First impression is the last impression - Any application is as good as the user interface it provides to the user. To provide the user with a clean and crisp presentation we will explore and decide on the proper UI technologies to use and implement them in a way to handle the complexity of the
   1. User experience – a better user experience will be explored and will try to provide an easy to use and interactive interface to make the user experience fun.
   2. Rendering technology – for fluent and dynamic flow, we will be reviewing and utilizing the best UI technologies that are available these days for a dynamic look and feel to the application. We will review performance and suitability of front end technology stacks like Angular, React, Vue and Backbone to decide which one makes more sense for our application.
   3. Native or Hybrid App, Application
2. Performance - Optimizing data by prefetching and caching - we will explore and decide on the backend technology stacks like Database management systems and the server technologies that will be used to deliver or serve the application content. We will review popular technology stacks available like LAMP (Linux, Apache, MySQL and PHP) or WAMP (Windows AMP) to ascertain if these fit our needs. An optimum technology stack that will cater to our needs better will be selected and implemented.
3. Hosting the application – Hosting an application you need an extensive setup servers, dev and production environments etc, for the starting we will use Amazon webservices to host our application as it provides a reliable and great quality service at a fraction of costs. We will use GoDaddy.com to secure a domain name for our application.
4. Features – We will consume multiple APIs to plan and chart out the road trip planned
   1. Maps and Navigation – will be the most important data and core feature provided by our application, we will select the best API that can talk easily with our technology stack will be selected. We will use Google Map API to get map related data
   2. Weather – AccuWeather API is to be used to provide this information about whether at any given point and place, our application using the Maps and navigation API will calculate at what point a person is going to be and will fetch weather information for the location at the anticipated time to reach
   3. Traffic – Traffic updates will be captured from Waze API, it provides
   4. Sites - fetch nearby attractions along the route
   5. Places to eat – Yelp API will be integrated and data will be fetched for a buffered area around the navigation route
   6. Places to stay – Hotels.com API will be integrated to get data regarding hotels available along the route
5. Customizations – What all a user can do with the app
   1. Avoid tolls – if the user wants to avoid the tolls, the routing will be done such that the tolls are not encountered on way,
   2. Avoid highways – for users wanting to enjoy more scenic views or having a relaxing drive without being bothered about heavy and fast vehicular traffic.
   3. Taking a leisure trip or want to just get to destination in time
6. Social Media integration – Provide a method for user to link out to social media applications, any trip is not complete unless you share your pictures and status with your loved onces, we will provide user with option to share pictures and trip details with their friends and followers on the social media.

Overall we feel our application will provide a better and collective platform that user will appreciate while undertaking the planning or undertaking a road trips.

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