Our Goal:

We want to keep you off the roads and get you home. By using our website, users will spend less time on the road as they can select the best highway to take for their commute. Don't waste your time on the road when you can be home.

Minimum System Requirements:

All a user needs is a compatible web browser with an internet connection.

- Internet Explorer Version 8 or Higher, Firefox Version 3 or above, Google Chrome / Chromium Version 9 or above, Safari Version 4 or above, Opera Browser Version 9 or above.
- iOS Version 1.6 or Higher.
- Android Version 1.6 or Higher.
- Windows Mobile/Window Phone version 6.0 or Higher.

Software Development:

Python and PHP are the primary programming languages used to create this project. Apache is used to host the web-server. A pre-allocated server is used for parseing all the traffic and weather data for all the highways in the state of New Jersey. This data is used by the analyzer for the traffic predictions.

Design Considerations:

The database uses MySQL as this allows multi-user access with efficiency.
Python, a scripting language, was used to parse and store all the necessary data into a database.

PHP, an embedded programming languages used with HTML, allows easy and efficient web-development.

Future Plans:
- Make the website more efficient.
- Incorporate estimated travel time.
- Incorporate future planned road events into the severity analyzer.
- Expand to a larger region.

OFF THE HIGHWAY... ON YOUR DRIVEWAY
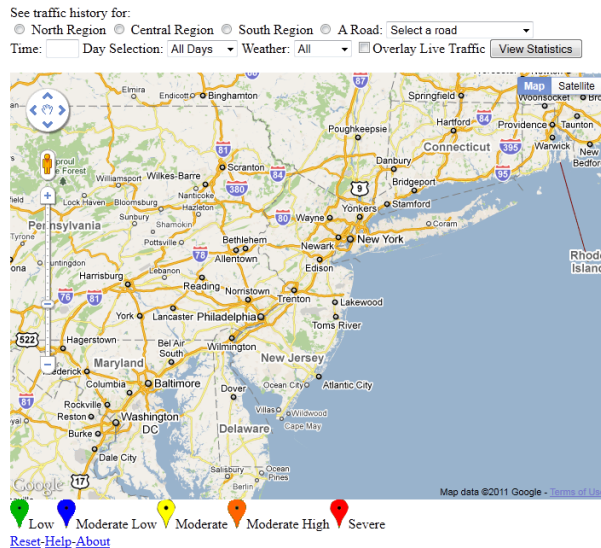

Traffic Monitoring System

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Group Website:
https://sites.google.com/site/452trafficmonitor/

Project Website:
http://se1.engr.rutgers.edu/~group7/

Purpose

The Traffic Monitoring System is a website that displays traffic along the major highways in the state of New Jersey. By using a web-browser, a traveler can view the various highways he or she can use to get to his/her destination. The website provides the traveler with traffic predictions based on historical data and weather patterns. In addition to this, the user has an option to view live traffic as well. Using all this information, the traveler will spend the least amount of time on the road and will reach his / her destination in the fastest time possible.
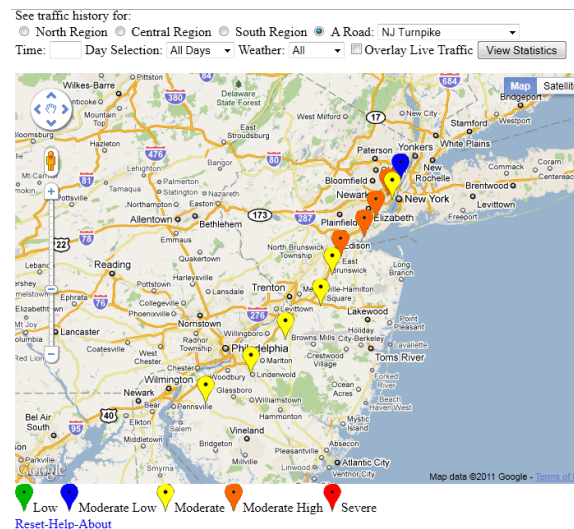

A snap-shot of the Traffic Monitoring Website.

How to use the website:

A user can access the traffic monitoring system by going to http://se1.engr.rutgers.edu/~group7/. When the user reaches the page, there are a few options to select. The user can select highways to travel on based on the three regions of the state of New Jersey, North, South, and Central. The other option is that the user can select a specific highway to travel on using the drop down menu. After doing so, the user enters a time and day at which he or she chooses to travel. The user then selects the weather conditions for which he or she wants to view traffic conditions for. The website then analyzes the user inputs and presents the user with predicted traffic conditions. The user also has the option to overlay the map with live traffic conditions. He/she also has the option to bookmark frequently viewed options.

Note: There is also a help link at the bottom of the page to guide the user on how to use the web-site.
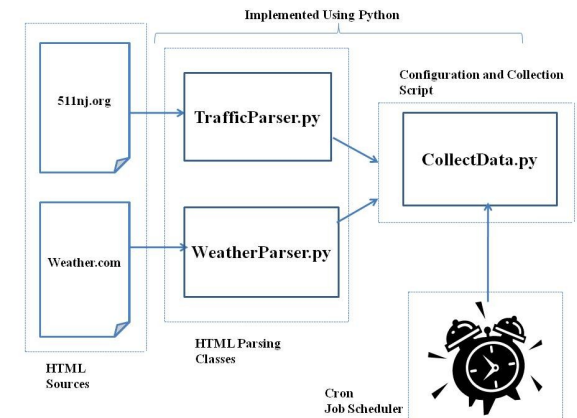

A snap-shot of the Traffic Monitoring Website with markers showing the different levels of traffic on NJ Turnpike.

What happens behind the scenes:

One may ask how does the web-site present the user with the predicted traffic conditions.

The method(s) the website uses to predict the given traffic conditions work based on an algorithm. A pre-set database constantly collects weather and traffic conditions for all the highways in the state of New Jersey. Once the user selects his/her desired options on the website, the information is sent to the analyzer. The analyzer gets all the required information from the database, via the database interface, for all the necessary information needed. The data is then analyzed and returned to GUI which displays the colored makers based on the traffic severity. A small graphic depicts the workings of the web-site.

We are Mobile!

Users can access the website using their iOS, Android, or Window mobile device.