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Problem Statement:

During disasters such as wildfires, search and rescue teams must be able to search for and get to survivors as fast as possible. Current navigation systems allow responders to calculate travel time and distance between origin and destination and propose an optimal route to the destination. However, many of the current platforms do not rely on real-time data (e.g., road closures, damaged roads etc.) which can cause invaluable time to be lost.

This project leverages social media and other datasets to identify real-time road closures due to damaged roads, power outages and other blocked routes that may affect traffic lights, travel time, travel safety and more. The system will allow rescue teams and the public to search for any of these conditions and identify if and where they exist within California. (street, neighborhood, city etc.)

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Workflow:

1. Data Collection (Twitter, Wikipedia, Here.com)

2. Exploratory Research (Here.com, Google API)

3. Feature Engineering (convert entity location with geoPy)

4. Application Workflow

5. Future steps and Potential Concerns

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Background Data Scrapes

Wikipedia and Other Resources

- Wikipedia Scrapes
 - California Counties and California Disasters
 - Sanable Free going back 10 years
 - Open Street Maps
- CalTrans aims to provide a safe, sustainable, integrated, and efficient transportation system.

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Twitter APIs

Tweepy and GetOldTweets3

Google and other Mapping systems can have a delay when integrating road closure data into their routing algorithms.

To mitigate this, we used live tweets from Twitter to update our app with live traffic data.

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Enter @CalTransHQ

California Department of Transportation has several twitter accounts that post updates on traffic conditions. The counties of California are divided into districts and each district has a corresponding twitter account.

Using the county and the date range from the "Historical First" dataset, we were able to create search criteria that

introduction

Hello everyo

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