



CSC431

Real Time Tracking and Analysis of COVID Hotspots

Project Proposal

Team #13

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Software Engineering course project

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Preface

This is a proposal for the “Real Time Tracking and Analysis of COVID Hotspots” project for partial fulfillment of the requirements of a Software Engineering course (CSC431) project in the department of Computer Science at the University of Miami.

This proposal provides the scope and context of the project to be undertaken. It details the intended user group and the value that the system will have to them.

The intended audience of this document is the course professor and teaching assistants so that they can determine whether the project should be approved as proposed, approved with modifications, or not approved.

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1.0 Overview

1.1. Purpose, Scope and Objectives

We are developing a COVID-19 data tracker for the general public. Our goal is to inform the public of the coronavirus risks associated with particular localities by tracking the spread of the virus in said locations. One unique feature of this Coronavirus tracker would be its future COVID data prediction capabilities. We are planning on using past data, and the Artificial Intelligence we will implement to create future predictions of the Coronavirus spread outlook. Doing so may prevent unnecessary exposure to the virus and help slow the spread. This website can be used by all age groups, but it will certainly benefit the older generation and the high risk group the most. This web application can be used all over the United States and potentially in other countries. HTML/CSS will be used to design the website, and JavaScript as well as Vue.js and React.js will be used to give it added functionality. The server will be maintained by SQL.

1.2. Project description

COVID-19 Tracker will have the following features:

- An overall map that provides danger zones with high COVID-19 positive testers (we will use existing maps and modify them)
- A search bar that allows the user to search up a zip code and see the infected population and the number of new cases in the area (we will make this ourselves)
- A date and time display (programs exist to support this)
- The ability for the user to access data of a location from the past month (combination of existing and new tools)
- The ability for the user to select a future time frame, and access predicted data generated by the Artificial Intelligence we will implement to the web application (this is the unique feature that most other Coronavirus tracking web sites don't have).
- If allowed, the website will track the user's location and warn them if they are about to enter a high-risk zone. (we will use existing geolocation software)