

# Assignment 8: Functional Requirements

Ryan Bomalaski and Venkatesh Sekar

## **Product retrieves relevant thermal map**

- The product shall retrieve the respective district based on the district identifier.
- The product shall hit the database to navigate to the respective API to retrieve the thermal maps.
- The product shall return the exception message if there are no maps present for the district.

## **Product uses thermal maps, district temperature readings and weather forecasts to predict temperatures for each road section for the district**

- The product shall have accurate and up to date maps, temperature readings and weather forecasts.
- The product shall run this data through appropriate algorithms to predict issues.
- The product shall modify predictions based on feedback as the product is used.

## **Product predicts which road will freeze and when they will freeze**

- The product shall run the algorithm to predict the freezing temperature.
- The product shall provide the workers necessary time by informing the formation of ice before handedly.
- The product shall provide no false alarm.

## **Product schedules available trucks from the relevant depots**

- The product shall assign the trucks based on availability.
- The product shall send notification to respective department if no trucks are available.
- The product shall send notification to the drivers.
- The product shall create an alert system as a reminder.

## **Product advises the engineer of the schedule.**

- The product shall send the notification to the engineer about the task.
- The workers can update the product so that the task will be marked as done.
- Once the task is marked as done then the map and product shall be updated.