

Project Requirements

Project Description - TalkToMe is an application that detects and handles suicidal intention on social media through machine learning. This application will first ask the user to input a string or image and then analyze the input to detect if suicidality is present. After the output is generated. The user is also prompted to either fill out a risk form or run their input through another risk analysis model to determine specific level of risk. Once the level of risk is detected, a specific action is explained based on the models' outputs.

Target Audience - The target audience is the general population. In specific, the most common users for this application will be:

- A suicidal person's friend or family member
- A suicidal person themselves
- A crisis center volunteer

Formal Requirements

1. Detect suicidal intention based on image input.
2. Detect suicidal level of risk based on text input.
3. An informational page exists containing additional resources.

Design Document

Statement of Goals

TalkToMe is an application that detects and handles suicidal intention on social media through machine learning. This application will first ask the user to input a string or image and then analyze the input to detect if suicidality is present. After the output is generated, the user is also prompted to either fill out a risk form or run their input through another risk analysis model to determine specific level of risk. Once the level of risk is detected, a specific action is explained based on the models' outputs.

Functional Description

*Since this project is an extension of a project I already made, the descriptions below encompass new functionality only.

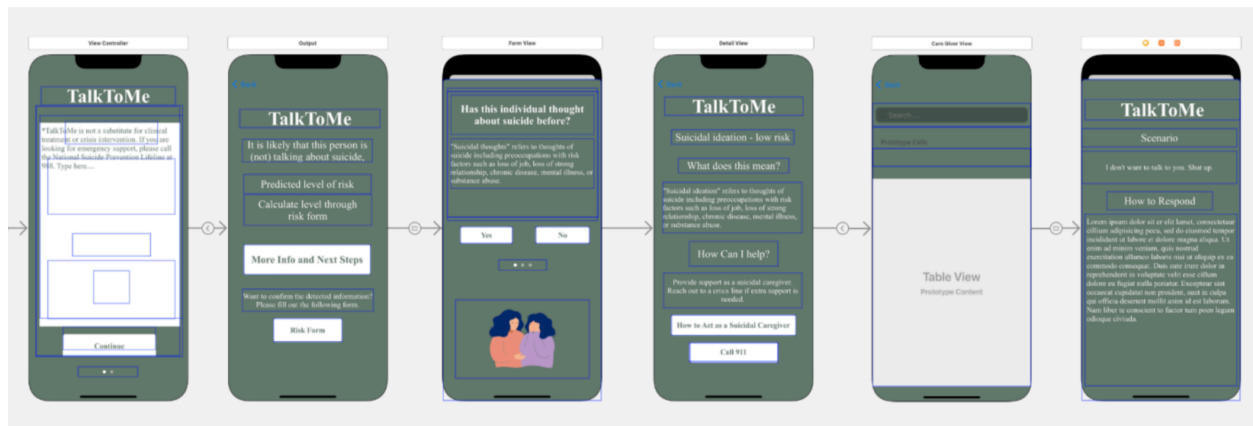
1. Detect suicidal intention based on image input.
2. Detect suicidal level of risk based on text input.
3. An informational page exists containing additional resources.

Technical and Data Feasibility

One main obstacle that might come in the way of implementing the functionality explained above is data constraints. I haven't found any datasets that I can work with just yet, but plan on continuing to look at resources.

User Interface

*Will add the latest user interface with changes to this document when finished creating. Here is the current user interface of the application:

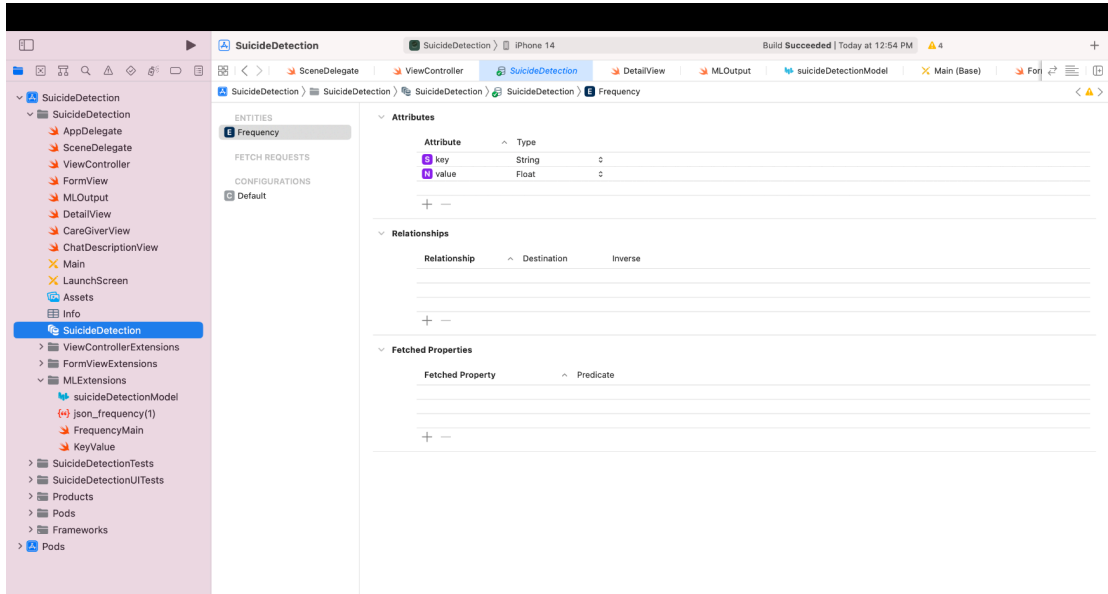


Flow Chart

*Will add the flowchart to this document after I'm done creating it.

Storage

Currently, Core Data is being used to store a dictionary needed for the machine learning models to run. This data is being stored in the user's personal database:



Timeline

Week of November 6th:

- Monday - Finalize which datasets should be used in the application
- Tuesday - Starting off with one dataset, start pre-processing
- Wednesday - Continue working on preprocessing and cleaning the data
- Thursday - Implement multiple ML models on the cleaned data
- Friday - Work on fine-tuning model parameters to optimize the model