

CSCI 352 Final Project (Fall 2019)

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1. Introduction

Project Name: Self-Assessment Diagnostic Tool (SAD)

The SAD tool is an interactive self-diagnostic tool designed with the intention of allowing individuals to narrow down the possible causes of common ailments. It is not intended to replace professional medical advice but can be used as a preliminary assessment to determine if a doctor's visit may be necessary.

Information will be presented using easy to understand interactive graphical menus. Users will select the appropriate area of the body that represents the source of their discomfort and will then be presented with a list of possible symptoms for that area of the body in a check box format. The program will then search a compiled database of common ailments or injuries to that body part and show the user a list of up to the top 5 most probable causes with possible treatments.

This program is intended to assist injured or sick people with non-life-threatening issues that do not currently have the means to seek a professional medical evaluation to receive a broad level evaluation of their medical needs.

1.1 Background

A basic understanding of low level and layman's medical terms is recommended for a better understanding of some of the more complex parts of this paper. This project was chosen because it combines multiple different elements and functionalities of the proposals of each member of the group into a single application.

1.2 Challenges

The biggest challenges presented for this program will be writing the algorithm that connects a user's input with an appropriate possible diagnosis, creating intuitive graphical user interfaces appropriate for users of multiple ages and educational backgrounds, and creating a responsive and accurate database.

2. Scope

The program will be considered complete when it is able to:

- Present users with a concise list of up to 10 “Yes/No” questions most related to the selected body part.
- Return up to 5 possible causes for the user’s discomfort.
- Return a recommended treatment for the most probable cause of the user’s discomfort.

Stretch Goals:

- Add confidence interval percentage to the diagnosis screen.
- Expand the question system to a “1 – 5 scale” from the current “Yes/No” format.
- Recommend a doctor in the user’s town if it is determined to be required by question responses.
- Present user with locations to purchase any over-the-counter medicines recommended.

2.1 Requirements

<TO BE CONTINUED – 9/19/2019>