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HC502

Keystone Abstract: Game Plan

The goal of this project is to implement a customizable goal functionality for Game Plan, as a mobile application by Boston University faculty in conjunction with the Hariri Institute with the intention to encourage young adults with intellectual and developmental disabilities’ (IDD) to set and accomplish health-related goals. Presently, the application prompts users to select goals from a list of hard-coded values. While predetermined goals are useful in prompting users with suggestions, the absence of a user-input functionality restricts young adults with IDD’s ability to set goals custom to their needs and develop independence. Giving users more agency is necessary to the intention of this app as it encouraged IDD individuals to practice their independence and become comfortable with navigating tasks by themselves. I implemented this functionality using natural language processing tools such as Python’s Natural Language Toolkit (NLTK) and Scikit-learn (Python’s machine learning library). The technology is able to read a text input and classify the goals under one of four main categories: work, school, self-care, and leisure. To develop the classification model, the algorithm was trained against document containing sample user inputs that captured the span of each goal category. Upon receiving input, sentences are transformed into their vector representations for analysis. A voting classifier is then used to determine which category a sentence belongs to; the category with the majority vote will be selected. After defining a custom goal, users will be prompted with suggested first steps to take in accomplishing the task.