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CSE 403 AA
Project Proposal

Cooking Assistant

The Problem

Smartphones provide convenient access to a large number of recipes, but they can be cumbersome to use in the kitchen. Full hands and messy fingers make operating a smartphone a struggle while cooking.

Our Solution

Provide a recipe/cooking Android application designed for hands free use in the kitchen. Core features will include a database of recipes and a cooking mode. In cooking mode a recipe will be displayed in large font step by step instructions, and will allow touch or voice control. The basic functionality includes a previous and next command, allowing the user to progress through the recipe hands free.

Our audience is anyone who cooks and uses an Android smartphone. There are many similar solutions, ranging from recipe collection apps, down to simply using a web browser. It seems clear that a substantial group of Android users are using their phones as cooking assistants. We believe that our combination of unique features and the latest APIs will differentiate our app from the rest.

Our application will be written in Java for the Android operating system. This will allow it to be run on a wide variety of phones and tablets. We will use the latest speech recognition and text-to-speech APIs released in Android 4.4. Our app will rely on a relational database for managing and storing recipes.

There are many optional features we would like to include to make our app more useful and appealing. Speech-to-text could be used to read recipes, allowing the user to focus their eyes elsewhere. The voice recognition could be expanded to allow complete control of the app, allowing users to switch recipes or even search hands free. Another useful feature would be a small set of tutorials. We envision these as a small pop-up video that briefly explains a procedure such as dicing, blanching etc. A related feature would be common substitutions, again accompanied by text to speech for cooking mode.

Our greatest challenge will be implementing enough features to make our app appealing, in the relatively short amount of time we have available. To mitigate this challenge we have narrowed

the core feature set as small as possible. Additionally we will keep a priority queue of optional features ready to be implemented if time allows.