

PROJECT PROPOSAL

PROJECT – SELF TUTOR

PROBLEM DESCRIPTION

Problem is the difficulty in learning a new language. Education is our application domain. We feel that the language is the first step to open doors to interaction and communication. The world is becoming increasingly multiethnic. So, being able to communicate in more than one language is an important trait.

In the existing approaches, we are not able to close the gap between what we learn in a new language and our everyday activities. Being able to immerse the user in the language they are trying to learn will help them remember by mapping to the real world.

TECHNOLOGY

We chose the Google glass because it's portable and can be taken anywhere. The display of the Google glass is not impeding the user from their normal sight and ubiquitous enough to blend with them.

Our idea is to implement a curriculum that users can use to learn a new language. We will attempt to implement 3 stages of learning. In stage one, the user will learn how to write characters of a language. In stage two, the user will learn how to write words. In stage three, the user will be introduced to the words in context by having objects in their everyday life captioned with words. We believe that the user will be able to learn much more efficiently if they are able to connect the words they are learning to actual objects.

One of the major benefits of our program in contrast to others is that the Google Glass will be able to determine whether the user spelled the letter or word correctly.

For example, Google glass can prompt the user to write a letter or a word. After the user tries to write the letter or word, they can take a picture of it and Google glass can use Optical Character Recognition (OCR) mechanism and use text extraction to recognize what the user wrote and give real-time feedback. In addition, in stage two, the Google Glass can present the user with images that the user must write down what the object is. For example, if a picture of an elephant is shown, the user must write the word "elephant". We can also use Google glass to generate captions based on real life scenarios. For example, in stage three, a user can look at a chair and the Google glass will use OCR to recognize it is a chair and then caption the object with the word "chair".

Yes, there are applications which do caption the images, but not for the purpose of helping the user to learn a new language.

IMPACT

There are a lot of ways this project can grow in the future. We can provide extensive tutorials to teach more than just letters or words, such as grammatically correct sentences. We can add support for more languages other than English. We can also provide comprehensive information about what the user is actually looking at. For example, the Google Glass can also present facts about a landmark or local cuisine that the user is looking at.

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