Business Case Project Proposal

MEXICAN SIGN LANGUAGE ALPHABET IMAGE CLASIFICATION SYSTEM

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Due: March 27, 2017

PROJECT SUMMARY

A project will be developed as part of the Software Design & Architecture course and with the purpose of having a usable solution for a problem given in my scholarship. This solution is intended to be shown to new students interested in the ISC degree.

OBJECTIVE

As it was mentioned, this project is being developed in order to solve the problem described by my artificial intelligence tutor of detecting and classifying a hand sign from the alphabet represented in the Mexican Sign Language. The objectives of developing this project are mainly 2 one in my end, which is to learn about the basics of computer vision and machine learning, and the other on my tutor/school's end, which is to include more people to have access to more ways of interacting with computer and to increase awareness of this type of problem.

REQUIREMENTS

This solution should be easily accessible in order to be shown when needed. Apart from being a software solution, it also has to be a way in which knowledge is represented by documenting the process by which the solution was reached and the the solution itself in order to be self explanatory, in case someone wishes to understand it.

VALUE

If this problem is solved, I would have learned a lot of the basic principles behind how can we make a computer see and interpret the real world and how different algorithms in the area of machine learning may help to achieve this goal. Also, the school and I would be able to show the kind of work that can be achieved by me or any student studying ISC.

BUDGET

The budget designated for this project is around 5 to 8 weekly hours distributed in the design, development and documentation of this project. The period in which this solution will be developed is constituted of 6 weeks which span from the 13 of february to the 27 of march of the present year. The total number of hours planned for this project is in the range of 30 to 40 total work hours.

PRODUCT

In order to achieve the objectives of this project a system must be developed. This system must be capable of detecting a hand sign in an image and predicting a classification for it amongst the possible letters of the alphabet. The actual solution may be developed in a script which may require a lot of testing and experimentation. Depending on the time left and some other risks like the deployability this solution can end up being a standalone application, but for scope purposes it will be a web application which teaches the working solution and the process by which it was obtained. This product will require internet connectivity and a way of obtaining images (webcam).