eVoices: Animal Tlatoque
Encouraging Minorties to Study Computer Science

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Introduction

Sobering Statistics:
Women earn only 35% of CS degrees, despite strong performance in high school math/science. Females are choosing not to pursue CS.
Latinos earn 7% of CS degrees while they make up 14% of US population. Latinos are less likely to have the preparation in math and science, that is needed for an engineering program, beginning in middle school when class tracking begins.

Why should we correct the imbalance?
Products are a reflection of their designers. For businesses, underrepresentation of certain groups results in a limitation in point of view. A more diverse population of employees means more perspectives, more and better products, a larger buying audience, and increased sales. Ethically, if societal factors are deterring minorities from pursuing work in a lucrative field, such as Computer Science, then steps need to be taken to remove those obstacles.

What are we doing about it?
eVoices: Animal Tlatoque will be a summer program for middle school students aiming to expose females and Latinos to Computer Science. In order to interest a new pool of students, two culturally significant themes: Endangered Species and Mesoamerican culture, have been chosen for this program.

Developing the Environment

One of the goals of this project is to make an environment that middle school students can contribute to. However, this environment must also be built and maintained by under-division undergraduate students.

WordPress
The process of adding the backend (the users, administration section, file uploading, etc.) began by exploring an open source blog project called WordPress. Using WordPress would have been helpful because most of the backend work would already be setup. After a couple of weeks of discovering much of what WordPress was capable of, it was decided to not use WordPress because the environment is set up in a way that makes it difficult to create webpages that do not use only static text (like an “About” page for a website), using WordPress to build something other than a blog would require too many manipulations. Instead, it would be best to use something smaller.

Wildflower
Second, the option to use a small Content Management System (provides most of the backend) called Wildflower was considered. However, Wildflower did not offer enough to make the process of understanding the inner workings and how to change them worthwhile. Instead, the alternative of starting from scratch was chosen.

CakePHP
To make the process of starting from nothing simpler, we chose to use CakePHP, a framework for the language PHP (a framework accelerates the building process). However, this requires learning a whole new set of tools. Once learning the basic functions Cake, the process of setting up a backend was immensely simplified.

Next year’s summer program will include trips to the Santa Barbara Zoo as well as UCSB’s CNSI AlloSphere.

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