CSC 554: Human-Computer Interaction

# Course Project Report

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# Introduction

In this project we studied the Computer Science (CSC) Department’s website, of North Carolina State University (NCSU), by utilizing the fundamental principles of Human-Computer Interaction. On applying various methods such as heuristic evaluation, affinity diagramming and task analysis etc. we have proposed a new design of the website which aims to provide better user experience and improved look & feel.

We started off by examining the existing product (CSC website) for its design pros & cons with the help of heuristic evaluation and contextual design. We gathered data from the website users by interviewing them and conducting surveys. We also performed competitive analysis and task analysis. Finally we came up with a wireframe prototype for the new design which we prove to be more user friendly by re-evaluating it with a second heuristic analysis.

**NOTE:** Going forward, we refer to the NCSU’s CSC Website as “CSC website” or as “product” for simplicity.

# Background

The CSC website under study, as stated above, can be visited at <https://www.csc.ncsu.edu/>.

We chose to conduct our project on the CSC website primarily because we are also one of its users, being the current Computer Science students at NCSU. We also had access to the vast and diverse consumers of that website which helped us in getting measurably useful feedback from surveys and interviews for our study.

The project was initiated by conducting heuristic analysis by each of the team members individually. Together as a team, later, we conducted several interviews with different types of users like future students, current student, faculty and parents of the students etc. All interviews were 1-on-1 basis, strictly confidential and anonymous to maintain integrity of data generated from their user stories. Similarly, the survey conducted was also anonymous, which can be viewed online at: <https://ncsu.qualtrics.com/jfe/form/SV_86x2Cer7OUs3Jid>

In the last stage, we compiled all the information and analyzed it to propose a new design of the website, of which the methods and processes used are described in the following sections of this report.

# Methods Applied – How and Why

# Heuristic Evaluation of Existing Product

# Contextual Design

## Interviews and Observations

## Interpretations

## Affinity Diagrams

## Visioning and Ideation

# Survey and Analysis

To gather quantifiable data from the users regarding the website’s usability and experience, we asked them to fill out an online survey hosted on NCSU Qualtrics, [here](https://ncsu.qualtrics.com/jfe/form/SV_86x2Cer7OUs3Jid). The survey presented a wide variety of questions ranging from rhetorical (yes/no) type, likert scale type, and free text type as well. Based on the attitude of the questions asked, we tried to infer how user responses were affected by cognitive, affective or behavioral components.

Questions were asked to understand if enough visual cues and relevant images/icons were added for the user, and if yes, were they relevant to the information they were trying to seek. We also measured the average frequency of visiting the site for each user, what is the primary task they do on the website, and were they successfully able to accomplish their tasks with minimal efforts. Furthermore, a set of questions also targeted to see if users found adequate and quality content on the website as well as how fast did they find it.

Based on all these diverse set of questions, we then analyzed the response data to seek and resolve the major pain points of users. We made sure that these points are addressed well into our new proposed model for making the website more user friendly. Following are few reported responses as shown below:

# Competitive Analysis

# Task Analysis

# Prototyping

# Internationalization

# Heuristic Evaluation on Proposed Model

# Conclusion