

Spring 2015

# Honors Project Database UI Redesign

Fred L. Johnson Jr.

University of Akron Main Campus, flj5@zips.uakron.edu

Please take a moment to share how this work helps you [through this survey](#). Your feedback will be important as we plan further development of our repository.

Follow this and additional works at: [http://ideaexchange.uakron.edu/honors\\_research\\_projects](http://ideaexchange.uakron.edu/honors_research_projects)



Part of the [Graphic Design Commons](#), and the [Graphics and Human Computer Interfaces Commons](#)

---

## Recommended Citation

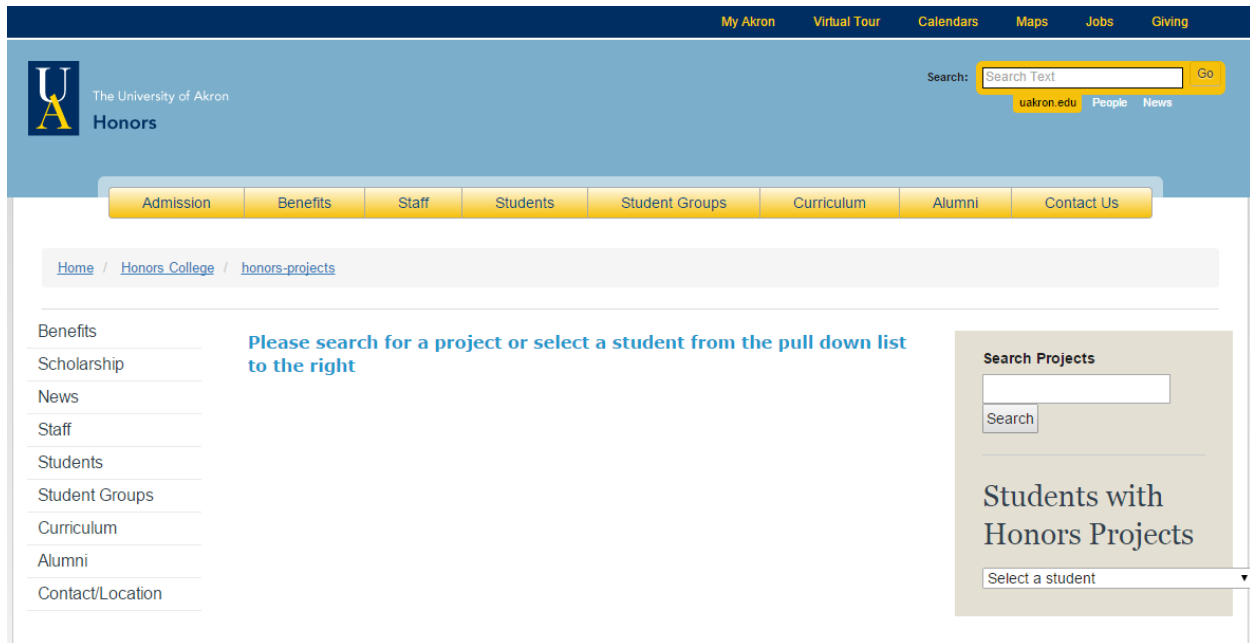
Johnson, Fred L. Jr., "Honors Project Database UI Redesign" (2015). *Honors Research Projects*. 71.  
[http://ideaexchange.uakron.edu/honors\\_research\\_projects/71](http://ideaexchange.uakron.edu/honors_research_projects/71)

This Honors Research Project is brought to you for free and open access by The Dr. Gary B. and Pamela S. Williams Honors College at IdeaExchange@UAkron, the institutional repository of The University of Akron in Akron, Ohio, USA. It has been accepted for inclusion in Honors Research Projects by an authorized administrator of IdeaExchange@UAkron. For more information, please contact [mjon@uakron.edu](mailto:mjon@uakron.edu), [uapress@uakron.edu](mailto:uapress@uakron.edu).

## Honors Project Database Redesign

### Introduction

For my honors project, I wanted to do something that would add value to a person or group of people while at the same time developing skills that would be useful in my career after college. My initial thought was to make a website or an app. At the time, I thought this would be the nature of my future career so the idea was appealing. However, I didn't know what I could do or who I could make one for that would add real value. To get ideas, I decided to use the honors project database and this is where my idea for a project came together.



The database provided some hurdles to searching for projects. The only options were what appeared to be a keyword search and a search by student name. The keyword search didn't provide as many results as it should have and unless you know the student's major, searching by their name isn't very helpful. It was by pure luck, however, that the first project I came across was Adam Lamer's project for the database itself. Reading this project showed me that doing a redesign of the front end was something I

Fred Johnson  
Senior Honors Project

could do. This new project satisfied everything I wanted in a project. I would be able to add value to the Honors College and I could develop web design skills. After meeting with the Honors College Dean, Dr. Dale Mugler, to get his thoughts on what this new database could be, I learned that this project would be more than simply developing a new front end for a database. I would also have to provide education to the Honors College staff on how to upload new projects to the database (a task that I didn't know how to do myself). I agreed to the project not knowing that this project would prepare me for my career in ways I couldn't have imagined.

### Planning and Design

While going through my Internet Systems Programming course in Fall 2014, I paid close attention to the languages I could use to implement the redesign. Another part of my education that benefitted me greatly in this project was my internship at Goodyear where I've been working since May 2014. My role there isn't very technical. My job there is that of a Business Analyst—I am a liaison between our IT department and business departments to help both sides work better together. Gaining this skillset helped me greatly during the planning of my project.

During the fall, I met with the Web Services department at the University to determine how I could best implement the changes to the database and the front end in dotCMS—that the University uses for its website. Working with them, the Honors College, and my department, I was able to put together a project that I believed would work well and allow me to satisfy all requirements and give the Honors College a training in how to use the database.

The main change I wanted to implement was a way to search for projects by a student's major. Since there are many potential majors an honors student could have, I needed to make a way to search by major that would give uniform results while being easy to navigate. The idea I came up with was having a group of buttons that would narrow down a drop down list of majors when clicked. I also wanted to

Fred Johnson  
Senior Honors Project

redo the name search to take away the possibility of misspelling names if a student chooses to search that way.

I knew that the main languages I would use for the project would be HTML and Javascript. For the buttons with the dropdowns I would use JQuery, and for styling I would use CSS. I created a mockup of the entire front end as three forms (one for each method of searching) contained in an html table. Since it was an early mockup, there was no connectivity to the database. I just wanted to show what the final product *could* look like. After developing a mockup using HTML, Javascript, CSS, and JQuery, I sent it to Web Services to begin work on implementation. Below is an example of the code and the look of the mockup.

```
<script>
$(document).ready(function(){
  $("#ast").click(function(){
    var ast = new Array("Automated Manufacturing Engineering
    Technology","Computer Information Systems","Construction Engineering
    Technology","Electronic Engineering Technology", "Emergency
    Management and Homeland Security", "Mechanical Engineering
    Technology", "Organizational Supervision", "Surveying and Mapping");
    $("#dropdown").find('option').remove();
    for(i=0; i < ast.length; i++){
      $("#dropdown").append('<option value="'+ast[i]+'"'>'+ast[i]+
    });
  });
  $("#as").click(function(){
    var as = new Array("Anthropology","Applied Mathematics","Applied
    Mathematics/Business Administration (B.S./M.B.A.)","Applied
    Mathematics and Polymer Engineering","Art Education","B.S./M.D.",
    "Biochemistry","Biology","Ceramics","Chemistry","Chemistry -
    Polymer","Child Development","Communication","Computer Science
    Management Track","Computer Science System Track","Dance","Dance
    Licensure","Dance Studies","Earth Science","Economics","English",
    "Environmental Science","Family and Consumer Sciences Teacher
    Education","Family Development","Fashion Merchandising","French",
    "Geographic Information Science","Geology","Geophysics","Graphic
    Design","History","Humanities","Interdisciplinary Studies",
    "Interior Design","Jazz Studies","Labor Economics","Mathematics",
```

The mockup consists of three main sections. The top section is titled "Browse by Last Name" and features a grid of letters from A to Z. Below this is a section titled "Browse by Major" which contains a list of major categories: Applied Science and Technology, Arts & Sciences, Business Administration, Education, Engineering, and Health Professions. The bottom section is titled "Search by Keyword" and includes a search box with a "Search" button. Additionally, there are sections for "Select College" and "Select Major". The "Select College" section has a dropdown menu with the selected option "Applied Science and Technology". The "Select Major" section has a dropdown menu with the selected option "Please select your college first".

## Implementation

Working together with Web Services, we were able to develop a front end of the database that fit the aesthetics of the website, was easy to use, and met all of the requirements of both the University and the Honors College. The style I used in my mockup was changed by importing stylesheets that already existed and some of the Javascript and JQuery were changed to allow the front end to pull from the projects stored in the dotCMS database. Our final product is displayed below.