ITSkills Fall 2023 report

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Project Description:

ITSkills is a web application designed to assist class choice among GGC IT students across the five different concentrations: Systems and Security, Data Science Analytics, Software Development, Enterprise Systems, and Digital Media. This is done through compiling the different job titles and most important skills required for these job titles and suggesting classes based on the job skills. The goal is that students will be able to look at the different professions for their concentration and be able to choose electives based on the job skills.

Implemented Feature:

In this semester, I have worked with Dr. Anca to continue developing the web application with the scope being to match each required skill to corresponding courses as well as expanding on the functionality/readability of the web-based tool (such as removing the overlapping characters with the class nodes by making the text span over two lines). The class data (in terms of which classes teach which skill(s)) has been gathered for multiple course catalogues and data from a student survey (this data has also been cleaned to be human readable).

Code Developed:

Most changes have been made under the JSON files for each concentration's node tree; these JSON files are found in the docs folder in the main repository. I have also used Jupyter Notebook to compile the class data into a dataframe which was then converted into a dataframe where each skill shows a list of classes that have the skill and whether the skill is a technical or soft skill. This code is located in itskills/Fall 2023/Notebook with the filename being EditingCSV.ipynb which requires the ITClassesSkillsCSV.csv to be located under the same directory as the notebook code. The purpose of this ITClassesSkillsCSV.csv file is to set up the structure of the dataframe; Each 0 or 1 under each class represents whether the class teaches a certain skill and the 0/1 under technical/soft represents whether the skill is a technical or soft skill respectively.

Plots/New Data:

Because this project focused mainly of the visualization for the website, there was no need for any plots for this class, but the new data gathered is organized like this:

Skills	Course	Tech/Soft
AWS	[ITEC 4000 Cloud Computing Technologies]	Technical
Agile	[ITEC 3870 Software Development II, ITEC 4860...	Soft
Andriod	[ITEC 4550 Mobile Application Development]	Technical
Blender	[ITEC 2110 Digital Media]	Technical
C#	[ITEC 3860 Software Development I]	Technical

In the above image, each skill has a list of courses associated with them as well as a column denoting the skill as either soft or technical.

CREATE Presentation:

The CREATE Presentation slideshow is located in the Fall 2023/Documents directory with the name but note that the actual presentation hardly used the slideshow for the presentation and instead showed a live demo as well as showing the resources for the project.

Vlog Website Showcase:

The vlog is located in the Fall 2023/Report directory and has the file name ITSkills_Fall_2023_Vlog.webm; this vlog explains and demos the project's website.

TODO list of features:

- Make a disclaimer page
- Edit/Create a new survey
- Center the "Creators/Authors" box in the about page
- Refactor the JavaScript file for readability (uses single letter variables with no comments)

What I learned in the class:

On the technical side, I learned how to edit JSON files and create new GitHub files through the web browser, but the bulk of what I learned in the class are soft skills. For example, I learned that during a meeting with a client, I should take notes of what needs to be done and I should write down any questions I had during the meeting with the corresponding answers for them. Much later I realized that I should have recorded the dates for these changes, but I realized this when the semester was nearly over.