CS 238

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Group 4

Project Phase 1

* Project Description

Our database system is focused on helping MS&T students to stand out more to possible employers. Our system will offer students a web interface to put their skills on display, and at the same time will offer employers to search for students by their specific skills. Missouri S&T students have Miner Jobs available to them to post their resumes, but Miner Jobs does nothing to let employers know who the students are or what they can do. Our system will help students find jobs and employers find employees with the skills they need, on a mass scale without either party having to meet at a career/interview. Companies can save recruiting time and money while students can find jobs easier.

* Conceptual Database Design

**Student**: Each Student has a class standing (Freshman, Sophomore, Junior, Senior, Alumni), a resume with an upload date, and an expire date, a first, middle, and last name, some set of user defined skills, a set of pre-defined skills, and a user\_id which uniquely identifies them. A Student majors or minors in a Department. Students can choose to use Pre-Defined Skills or User-Defined Skills to describe themselves.

**Department**: Each Department has a name, and can be identified by its ID. Employers can search for a Department and see a list of Students in that Department, and the number of students majoring / minoring in that Department.

**Experience**: Each Student has experience in some field which includes information about the Student's internship(s), part time position(s), full time position(s), and research opportunities. Employers can filter through students by searching for certain experience requirements.

**Employer**: Each Employer has a name, an associated company with company name, company address (zipcode, city, street, state), and a unique Employer ID

**User-Defined Skills**: Students can submit skills not in the Pre-Defined set of skills and use them to describe themselves. Used when Pre-Defined Skills does not contain the necessary skill to describe a Student.

**Pre-Defined Skills**: A set of skills which are always available for every Student to use. Set of skills may be appended if there is a popular User-Defined Skill(s) being used.

* Functional Requirements

The first thing that our system will allow users to do is create student and employee entities. This will involve a normal website registration process, and will create new entities for the respective groups. Along with this, all of the attributes for each entity will be instantiated save for the students resume attribute. Additionally this function will set the users major which involves the relationship between the student and the department entities

The user will be able to upload a resume which will change the resume attribute and its sub attributes.

The student user will be able update to add skills to their searchable profile. This will consist of the user either selecting skills that they have from a predefined list, or can optionally add a user-created skill or knowledge that they have. This can create new instances in the user-defined skills entity, and uses the relationship between student and each in the skills.

The student user will be able update to add experience to their searchable profile. This will consist of the user either selecting whether or not the experience was in an internship, a full time position, a research position, or a part time position. The user will then fill out the attributes of the job-type they selected. This can create new instances in the experience entity, and uses the relationship between student and experience.

The employer user will be able to search for users by selecting the skills and experience they are looking. The system will return to the employer a list of students that match the query. The employer will then be able to download the resumes of the student. This will use every entity in the system assuming the employer searches for a student with a specific skill, experience, and major.