**Mining for Mentors** for Microsoft

Group Five Project Proposal

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ITWS-4100: Information Technology and Web Science Capstone

Prof. Richard Plotka

## The Team

Group Five is a group of four senior Information Technology and Web Science students who have multiple years of professional experience in all areas of full-stack application development. Members of the group are all experienced with managing technology projects as well as developing and designing technology solutions for existing businesses.

**Tusa Larkowski** - *UX/UI Designer*

Tusa is pursuing a major in Information Technology & Web Science, with a concentration in Management Studies. She has extensive experience developing with front-end languages like HTML5 and CSS, and in utilizing interface design tools like Adobe XD. Professionally, she has worked on designing and constructing campaign and convention websites, as well as campus-wide information posters.

**Adarsh Mody** - *Back-End Developer*

Adarsh is pursuing a dual major in Computer Science and Information Technology & Web Science, with a concentration in Web Technologies. He has experience with full-stack web development through a variety of projects. Adarsh’s professional experience in backend development will prove useful for the proposed project as he is familiar with the technologies that are planned to be utilized.

**Mohammed Moftah** -*Back-End Developer*

Mohammed is a dual major in Computer Science and Information Technology & Web Science with, a concentration in Web Technologies. He is also currently a co-terminal student pursuing his Master’s in Information Technology, with a concentration in Management Information Systems. Mohammed has extensive experience working with servers, databases and back-end technologies. He has professional experience developing a full-stack web application on the same technology stack as the one proposed for this project.

**Ana Wishnoff** - *Project Manager and Front-End Developer*

Ana is pursuing a major in Information Technology & Web Science, with a concentration in Human-Computer Interaction. She has experience in usability, front-end development, JavaScript frameworks, and project management. Ana’s professional experience has also centered around front-end development, specifically for large-scale web applications using AngularJS.

## The Client

The client, Microsoft, is one of the leading global technology companies and best known for its Windows operating system, Office Suite, and internet browsers. More generally, it develops, produces, licenses, and supports software, personal computers, and other consumer electronics.

Microsoft’s vision is “to help people and businesses throughout the world realize their full potential.” To accomplish this, the company focuses on its six core values: innovation, diversity and inclusion, corporate social responsibility, philanthropies, environment, and trustworthy computing.

## The Project

### Summary

“Mining for Mentors” will be a web-based application to facilitate mentor-mentee relationships at Microsoft. The application will be developed with three main technology components:

* An intuitive, simple front-end interface built using AngularJS which will allow for a single page application structure and simplified data flow between the front-end and back-end.
* Data that will be queried from LinkedIn and organizational APIs which will then be stored on a MySQL database.
* An Express server that will compute the numerical “score” between users and serve the front-end.

### Scope

The scope of the project is to produce a web application that uses LinkedIn data to connect Microsoft employees with potential mentors within the company, and advise users on how to contact their potential mentors. The final product will center around the following five features:

**Getting Data**

Data for each user will be gathered from LinkedIn and/or organizational chart data. The core of this project is centered around utilizing and transforming quality data from these sources.

**Editable Profile**

Each user will have a profile that displays their gathered data as well as extra editable information about themselves such as their interests and whether or not they are seeking mentees. External data from LinkedIn or organizational charts will not be editable, so it can be updated as a user changes their LinkedIn profile.

**Matching Algorithm**

There will be a matching algorithm that will use the gathered data on two users to rate their compatibility. The numerical “score” generated from the algorithm will be visible to users while searching for a mentor.

**Filtering System**

If desired, the users can alternatively choose to utilize a manual filtering system to find their mentors, allowing them to set specific search parameters. Queried results are then listed based on their generated numerical score, and mentors who were automatically matched with the user will be highlighted.

**Email Templates**

Users will be able to use suggested templates for emails to assist them in reaching out to potential mentors. These templates will include things like shared connections, shared interests, generated matching “score”, and some general information about the user reaching out.

## Vision

“Mining for Mentors” will be a solution focused on providing users with an experience that is not only straightforward but also multidimensional. It will attempt to mitigate anxiety and inefficiencies that may occur for a user when looking for a mentor with specific experience or connections. The solution will also provide users with suggested mentors derived using the matching algorithm; this opens the user up to a set of mentors that may not be visible through a keyword search. Additionally, it will allow for the users to more effectively use their time by getting access to resources and guidance more quickly.

Group Five has solid experience in the technologies proposed, and is very experienced with tight deadlines, scope changes, and overall project management. The group is dedicated to not only providing a polished solution for the client, but also dedicated to keeping in constant communication with the client to ensure any concerns or changes are dealt with quickly.