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**IS480 Project Proposal**

**A Track & Career Discovery Platform**

**Track2Career**

**Version 1.91**

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**Team Members:**

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# Project Overview

## Project Description

The team seeks to develop a web-based and mobile friendly application that empowers students in the school of Information Systems to pursue their dream job. This application will enable students to search keywords on track specialization and explore the relevant skills, courses and tracks which will put them onto the right path towards their dream job. Beyond the search tools, the system will also provide valuable insights such as dashboard summary, skills analytics and wage analytics.

## Motivation

Our sponsor is interested in providing students with a platform that allows them to discover the track and courses to pursue that will not only guide but prepare them for their desired career or dream job. The platform will provide greater clarity for students in their career path and valuable insights on career opportunities associated with each track specialization.

**X-Factor**

1. **Elastic Search :** a scalable and extremely fast search engine. Its efficiency allows us to support more concurrent users (at least 30 users by mid-term) and its suite of features include being able to accommodate customized logic for assigning weightages and ordering of returned results. This aligns perfectly with our business case given that each track develops students’ skillsets to a different degree. Elastic Search forms the backbone of our solution and is the key differentiator between our system against a standard database-retrieve-display system.
2. **Robust user concurrency:** Given that there is no existing equivalent system in SMU. We hope that this provides a springboard for new students to assist their career planning. We seek to be able to host 30 concurrent users by the mid-term milestone, and scale this up to 50 concurrent users by finals.

## Stakeholders

|  |  |
| --- | --- |
| **Sponsor/Advisors** | Wendy Tan, Senior Instructor – School of Information Systems  Celina Koh, Career Strategist – School of Information Systems |
| **Users** | All SMU-SIS students matriculating from 2016 onwards |

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## Scope

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| --- | --- | --- | --- |
|  | **Function** | **Details** | **Description** |
| Core Functions | Log-In | Perform log-in to system | User can access the application using their credentials to log into the system. There will be user access level control, to accommodate both students and administrators. |
| Home page | Input user profile and select search options | Users are required to input their skills and courses taken. Once their profile is completed, users can choose to commence their search for an academic track or a dream job. |
| **Track Discovery Platform** | | |
| Search by Academic Track | Perform predictive and suggestive search options based on selected track | Search input is assisted by predictive keywords and drop-down lists. Users are then guided in their discovery of a chosen track path towards the following:   1. Track-specific skills with skills gap analysis 2. Relevant jobs and industries 3. Wage analytics 4. Career pathway |
| **Career Discovery Platform** | | |
| Search by Dream Career | Perform predictive and suggestive search options based on selected desired career | Search input is assisted by predictive keywords and drop-down lists. Users are then guided in their discovery of a specific dream job towards the following:   1. Job-specific skills with skills gap analysis 2. Relevant jobs and industries 3. Wage analytics 4. Career pathway |
| **Analytics** | | |
| Skills analysis | Perform comparison between user’s present skill profile and requisite skillset for dream job | System will automatically match the user’s current skills against the requisite skillset necessary for his/her dream job. The skills gap analysis will be shown to the user. A recommended job based solely on the user’s skillset will also be provided. |
| Relevant Jobs & Industries | Retrieve results from API of JobSense | System will automatically pull the information on relevant jobs and industries from the API of JobSense. The relevant jobs and industries will be shown to the user. Relevant jobs & industries will be prioritized based on the order of the closest match. |
| Wage analysis | Retrieve results from API of wage dashboard | System will automatically pull the wage information from the API of wage dashboard. The wage analysis will be shown to the user. The URL of Wage Dashboard will also included in the page for users to explore other elements of the Wage Dashboard. |
| Career pathway | Retrieve results from API of JobSense | System will automatically pull the information on career pathway from the API of JobSense. The career pathway related to the dream job will be shown to the user. |
| **Dashboard** | | |
| Summary | Provides a summary of the user’s skill profile, dream job and ideal track | System creates a saved, downloadable report of the user’s profile, dream job, ideal track and the skills gap analysis. The user retains access to the history of saved reports on their previous searches. |
| **Administrative** | | |
| Admin Panel | Provides administrators with control options for the system | **Data**: Allows the updating of track, course and skills details in one CSV file and to be uploaded to the system |

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# Project Timeline

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# Risks

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| --- | --- |
| Type of Risk | Mitigation |
| Slip in the project time schedule due to complex functionalities may delay the critical path and result in a cascading effect on the entire project timeline. | Put in place buffer time in case of the event that a particular module proves too challenging to meet the specified deadline. |
| The sponsor may have changing requirements, due to changes in expectations from their clients. | Have regular meetings with the sponsor, to ensure that the team and the sponsor maintain the same understanding of the project. |
| API used may be in beta, and the results for analysis shown may be volatile and unexpected. | Research backups to these APIs, and have them ready to replace in the event that an API we use is unsuitable. |

# Resources and References

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| --- | --- |
| Resource Type | Language / Framework / API |
| Database | MongoDB |
| Front-End Development | JavaScript, HTML, CSS |
| Back-End Development | Java, Elasticsearch, JavaServer Faces (JSF), Ajax, Gradle |
| Browsers | Google Chrome, Firefox |