SW Engineering CSC 648/848 Spring 2024

Section 02

Team 05

Team Members	
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Database Engineer	Abby Lin
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Github Page:
https://github.com/CSC-648-SFSU/csc-648-02-spring24-team05

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1. Executive Summary

With the upcoming 2028 Summer Olympics hosted in Los Angeles, it is of utmost importance to not only show the best hospitality the US has to offer to the world but also showcase our greatest athletes. With so many capable athletes gearing up to represent the US, it can be challenging to find the best institutions that can launch their Olympic careers. With our app, OlymPick™, both aspiring athletes and university athletics programs can have a platform where they can showcase their skills and develop their athletic careers.

With an easy-to-use interface and streamlined search algorithms, athletes can look for the best universities that fit their Olympic training. By having multiple layers of filters, athletes can search for universities that have produced Olympic athletes down to the specific events as well as get details on performance records. Athletes can also share their athletic records with universities by creating a user profile. Universities can observe these profiles based on searches for particular sporting events or through contact requests made by the athletes themselves. Universities can then use OlymPick to recruit up-and-coming Olympic athletes and promote their athletic programs. This dual-purpose system allows OlymPick to be the optimal choice for any aspiring collegiate Olympic athlete.

Our student startup team, through our shared brilliance in UI design, programming skills, and diverse cultural backgrounds, is prepared to create a breakthrough platform that promotes the great diverse talent across the US. Through OlymPick, aspiring collegiate athletes gain the perfect networking tool that brings them closer to the shining spotlight of the Olympic stage.

2. Personas

Student

Name: Brandon Williamson

Age:18

Background: A high school senior who joined his local track and field team and also dreams of entering the Olympics. Brandon is doing research into which school will offer the best program to develop his career in sports while pursuing a degree

Goals: Find universities with outstanding records for track and field while also connecting with coaches to learn more about the offered programs/opportunities for training and competition.

Use Case: Brandon wants to join a university with a strong track and field team. In order to do this, he would need to create a profile where he can enter his current stats and then use a search feature and try to filter through the list of options. He would also need to be able to contact the coaches and universities to learn more about their offerings.

Name: Joy Perks

Age: 20

Background: Joy is a current college student eager to engage in the university athletic programs. She is keen to explore the opportunities they offer and discover how she can get more involved.

Goals: Joy is interested in learning more about the athletes that the university has produced as well as their respective sports and medals obtained in the Olympics. She would also like to potentially attend athletic events.

Use Case: Joy wants to find the right athletic program for her. She would need to be able to search through what programs the school has to offer in order to find the right program using the search filters. She will also search what type of athletes won medals in the school to choose which program she will go into. To take it one step further, she could contact the alumni and seek advice.

Faculty

Name: Rick Rogers

Age:40

Background: Rick is the athletic director at a public university in California. He has a strong passion for sports and a background in sports management. He is dedicated to enhancing the university's athletic programs and ensuring student-athletes have the resources they need to succeed athletically.

Goals: Finding innovative tools and resources that can help showcase the university's athletic achievements as well as attract talented student-athletes to the institution.

Use Case: Rick wants to build up his university's athletic programs with talented students. He would need to set up an account and public page for his university to highlight its offerings to

potential students. He would also want to use this platform to search through students and proactively recruit options. Additionally, he would need to communicate with applicants through the app.

Parents

Name: Sarah Williams

Age: 50

Background: A parent of a high school student who excels in swimming and has aspirations of competing at the collegiate level and potentially the Olympics. Sarah is interested in finding universities with strong swimming programs that can offer her child both academic and athletic opportunities.

Goals: Research universities with successful swimming programs, gather information about coaches and training facilities, and connect with universities to learn more about their athletic programs.

Use Case: Sarah is tasked with conducting the initial exploration of her child's journey. She needs to thoroughly examine comprehensive university profiles, programs, and coaching staff. To engage with university representatives and collect information about the program while facilitating areas for the athletes, she plans to utilize a dedicated app. Lastly, she will make an informed decision and initiate the application process.

3. Main Data Items and Entities

User Profile:

Meaning: Registered user profile
Usage: Contains information on the user's academic/athletic records, Olympic interests, contact details, and bookmarked universities
Data Attributes: Name, Contact Information, Academic Information, Athletic Information,

Faculty Profile:

Meaning: Information about a faculty member or administrator.
Usage: Contains details about their role, contact information, and university affiliation.
Data Structure: Name, Role, Contact Information, University Affiliation.

Advisor Profile:

Meaning: Information about an advisor.
Usage: Contains details about their role, contact information, and students they advise.
Data Structure: Name, Role, Contact Information, Advised Students.

University Profile:

Meaning: Information about a university offering athletic programs.
Usage: Contains details about the university, its athletic programs, coaching staff, facilities, and contact information.
Data Structure: University Name, Location, Athletic Programs, Coaching Staff, Facilities, Contact Information.

Coach Profile:

Meaning: Information about a coach within an athletic program.
Usage: Contains details about the coach's background, contact information, and teams they coach.
Data Structure: Name, Contact Information, Coaching History.

Sports Profile:

Meaning: Information on specific sports
Usage: Depending on the sport, contains scores, disciplines, and other metrics involved
Data Structure: Name,

Communication Tools:

Meaning: Features allowing users to communicate within the application.
Usage: Facilitates messaging between users (e.g., students, parents, faculty) and university representatives.
Data Structure: Messaging Interface, Notifications.

Search and Filter Options:

Meaning: Features enabling users to search and filter universities and athletic programs based on specific criteria.
Usage: Helps users find relevant universities and programs matching their preferences.
Data Structure: Search Fields, Filter Categories.

4. Functional Requirements

Users (Students and Parents)

1. Users shall be able to register for an account using an email address and a secure password.
2. Users shall be able to maintain personal, academic, and athletic profiles, which include contact information, academic history, athletic records, and personal statements.
3. Users shall be able to set preferences for university program notifications and communications.
4. Users shall have access to recommended universities and programs based on their profiles and preferences.
5. Users shall have access to a resource center with articles and guidelines on college athletics and recruiting processes.
6. Users shall be able to participate in discussions and chats hosted by various universities in the app.

University Admin

1. University Admin shall be able to post and update profiles.
2. University Admin shall have access to analytics tools to monitor engagement and interest from users.
3. University Admin shall be able to send personalized invitations to prospective students for recruitment purposes.
4. University Admin shall have the ability to create and manage content such as news and program highlights.
5. University Admin shall be provided with a reporting feature to generate reports on user engagement, application numbers, and platform usage statistics.
6. University Admin shall be able to manage and assign tasks to faculty members through the platform.

Faculty (Including Coaches and Advisors)

1. Faculty shall be able to create and publish their schedules for availability to students for consultations or scouting.
2. Faculty shall have the ability to track and monitor the progress and updates of athletes they are interested in.
3. Faculty shall be able to initiate contact with users for recruiting purposes with the option to offer positions.
4. Faculty shall be able to collaborate with other faculty members within the platform to strategize on recruitment and program development.
5. Faculty shall have the ability to endorse athletes on their profiles, providing credibility and visibility to the users.
6. Faculty shall be able to provide feedback on the platform to improve its functionality and user experience.

Communication and Engagement Tools

1. Communication tools shall support multimedia sharing, including images and videos, to aid in the recruitment process.
2. The platform shall redirect users to schedule appointments or interviews with university admin or faculty.

Search and Filter Functionality

1. The platform shall offer a recommendation system to suggest universities and programs to users based on their activities and interests.
2. All users shall be able to filter searches based on specific sporting events and relevant athletic accomplishments.
3. Searches can be done both through keywords and user manual input.
4. Filters shall include the ability to sort by academic and athletic scholarships offered, acceptance rates, and specific sports ranking within the university.

5. Nonfunctional Requirements

1. Application shall be developed, tested and deployed using tools and servers approved by Class CTO and as agreed in M0 (some may be provided in the class, some may be chosen by the student team but all tools and servers have to be approved by class CTO).
2. The application shall be optimized for standard desktop/laptop browsers e.g., must render correctly on the two latest versions of two major browsers
3. Selected application functions must render well on mobile devices (this is a plus)
4. Data shall be stored in the team's chosen database technology on the team's deployment server.
5. Privacy of users shall be protected, and all privacy policies will be appropriately communicated to the users.
6. The language used shall be English.
7. Application shall be very easy to use and intuitive.
8. Google maps and analytics shall be added
9. No e-mail clients shall be allowed. You shall use webmail.
10. Pay functionality, if any (e.g. paying for goods and services) shall not be implemented nor simulated in UI.
11. Site security: basic best practices shall be applied (as covered in the class)
12. Modern SE processes and practices shall be used as specified in the class, including collaborative and continuous SW development
13. The website shall prominently display the following exact text on all pages "SFSU Software Engineering Project CSC 648-848, Spring 2024. For Demonstration Only" at the top of the WWW page. (Important so not to confuse this with a real application)

6. Competitive Analysis

Features	Handshake	LinkedIn	Facebook	OlymPick
Search Filters	+	++	+	++
Map Integration	-	-	-	+
User Personalization	+	+	++	++
Bookmarking	++	+	+	+
Onsite Communication	+	++	++	+
legend	+ Features exist; ++ superior; - does not exist			

We have chosen Handshake, LinkedIn, and Facebook as our competitors. Handshake provides basic search and communication features that fall behind in terms of user personalization as well as advanced search filters like OlymPick. LinkedIn while maintaining a strong user base and offering extensive filtering tools and communication tools slightly lags behind OlymPick in terms of features like map integration and bookmarking. However, its highly personalized experience and established reputation in professional networking still make it a formidable competitor. Facebook while providing basic search and superior onsite communication lacks some features that are provided by OlymPick such as comprehensive user personalization and search filters. Overall, OlymPick is a strong competitor with its well-rounded features in all areas.

7. System Architecture and Technologies Used

Server Host: Google Compute Engine 1vCPU 2 GB RAM
Operating System: Ubuntu 20.04.6
Database: MySQL8.0
Webserver: NGINX 1.25.4
Server-Side Language: Python
Additional Technologies:

- Web Framework: Flask
- IDE: Pycharm, Visual Studio
- Web Analytics: Google Analytics

8. Team and roles

Team Members	
Team Lead	Johnny Kwon
Database Engineer	Abby Lin
Frontend Engineer	Zabiullah Niemati
Frontend Engineer	Zizo Ezzat
Github Master/Frontend	Ethan Ho
Backend Engineer	Nichan Lama
Backend Engineer	Fadee Ghiragosian

9. CheckList

List Item	Status
Team found a time slot to meet outside of class	DONE
Github master chosen	DONE
Team decided and agreed together on using the listed SW tools and deployment server	DONE
Team ready and able to use the chosen back and front end frameworks and those who need to learn are working on learning and practicing	DONE
Team lead ensured that all team members read the final M1 and agree/understand before submission	DONE
Github organized as discussed in class	DONE