Milestone 1

Olympian Tracker

SW Engineering CSC 648/848 Spring 2024

Section 2

02/27/2024

Team 3

Lei Woods (Team Lead)

Eric Kunzel

Chunyin (Alex) Chan (Front End Lead)

Elliot Bullard (Github Master)

Mila Avagimova (Back End Lead)

Oscar Galvez

Riel Orque

Table of Contents

Section I: Executive Summary

Podium Scholars

Our project, **Podium Scholars** is a web-based service aiming to take home the gold in the way college students, university officials, and athletic enthusiasts engage with the Olympic games within the USA's collegiate system. Led by a team of San Francisco State University students, this platform is designed to bridge the information gap between universities' athletic achievements at the Olympics and prospective students aspiring to Olympic greatness.

At its core, **Podium Scholars** serves a dual purpose: it allows USA universities to showcase their contributions to the Olympics, including athlete participation, sports represented, and medals won, and it provides a comprehensive search tool for students with Olympic aspirations. Users can effortlessly search by state, sport, and year to find universities that have historically supported athletes in their Olympic journeys. This service not only celebrates the universities' athletic programs but also aids in the decision-making process for students seeking institutions with strong support for their Olympic dreams.

What sets **Podium Scholars** apart is its user-centric design and innovative features. The application boasts a responsive user interface, optimized for both desktop and mobile devices, ensuring a seamless experience across platforms. By leveraging technology such as Amazon Web Services (AWS) for hosting, Ubuntu Linux as the operating system, and JavaScript alongside Express.js for server-side operations, the platform provides reliability, speed, and security. Our use of MySQL 8.3 for database management, coupled with the latest web standards including HTML5, CSS3, and TypeScript, ensures that **Podium Scholars** is not only at the forefront of technological innovation but also easy to use and accessible to all.

Furthermore, **Podium Scholars** integrates Google Maps and analytics, enriching the user experience with interactive maps and insightful data analytics. This feature allows for an understanding of the geographical distribution of Olympian-producing universities, enhancing the search and discovery process. To ensure user privacy and security, we adhere to best practices and utilize AWS Certificate Manager for SSL certificates, making every interaction secure.

The team behind **Podium Scholars** comprises a group of passionate SFSU students, united by a vision to empower Olympic hopefuls and celebrate athletic excellence within the academic environment. Our diverse skills in software engineering, user experience design, and project management drive the project's success, guided by modern software development processes and collaboration.

In summary, **Podium Scholars** provides invaluable services to USA's academic and athletic communities. It not only facilitates informed decision-making for aspiring Olympians but also

offers universities a platform to showcase their athletic prowess. Our commitment to excellence, combined with a user-focused approach and technological sophistication, makes **Podium Scholars** a worthy investment for the future of collegiate athletics and Olympic aspiration.

Section II: Personas and Use Cases

Personas

Aspiring Olympic Athletes
General Characteristics: College students currently enrolled in a U.S. university or future college students, like high school seniors, considering enrollment with dreams and aspirations to compete and win medals in the Olympic Games. They are active in sports, highly motivated, and seeking universities with strong athletic programs that can support their dreams.
Goals: To find a university with an outstanding athletic program that has a history of producing Olympic athletes in their sport of interest.
Skills: Basic internet navigation skills such as using search engines and social media platforms to gather information.
Pain Points: No general way of identifying, searching, comparing, etc., collegiate programs or Universities that produce Olympic athletes. No way of contacting university athletic staff for information about their university athletic program.

University Athletic Staff:
General Characteristics: Athletic directors, coaches, or administrative staff at universities.
Goals: To showcase their university's achievements in producing Olympic athletes, update the athletic program's latest accomplishments, and attract future aspiring olympic athletes .
Skills: Professional skills in sports management and education, basic understanding of web navigation for promotion, communication, and data analysis.
Pain Points: Lack of a platform to effectively promote their athletic programs' success in a competitive manner and engage directly with potential students. Limitations to showcase their athletes' achievements on a national level, challenges in reaching out to potential recruits directly, and maintaining updated records of their achievements.

General Sports Enthusiast:
General Characteristics: Individuals of varying ages interested in Olympic sports, may include parents of aspiring athletes, sports fans, or former athletes. They seek information on athletic programs for various reasons, including supporting family members or personal interest.
Goals: To explore and learn about universities' contributions to Olympic sports and potentially support or recommend programs to others.
Skills: Varied internet skills, from basic to advanced. Varied knowledge of olympic sports or sports in general
Pain Points: Difficulty accessing detailed and interactive information on Olympic athletes and the universities they come from. Limited access to universities and general information regarding their athletic programs.

Use Case 1

Title: Searching Olympic Programs
Actors: Aspiring athlete (Lei)
Description: Lei, an aspiring Olympic swimmer, wants to find universities with strong swimming programs that have produced Olympic athletes. She uses the application to filter universities by sport, state, and Olympic participation history by year. The application displays a list of universities with detailed profiles, including athlete achievements, training facilities, coaching staff, medals rewarded, etc. Lei would be able to examine each university by sports and state and is able to decide on which university she would like to attend.

Use Case 2

Title: Showcasing Olympic Achievements
Actors: Athletic director/coach (Mila)
Description: Coach Mila, a successful coach and athletic director, logs into the application to update his athletes' profiles with their latest achievements. She adds new medal wins, track meets, athletes personal records, training regime, to the website for future athletes to see the success of her training, coaching, and program. Coach Mila is also to make comments and reviews on each of her athletes regarding work ethic and performance.

Use Case 3

Title: Comparing and Rating
Actors: Current athlete (Alex)
Description: After participating and attending a successful university athletic program that has produced Olympic athletes, Alex has decided to leave his thoughts and evaluations on his current university athletic program. Alex can write reviews and rate each of his coaches and athletic programs. He can give insight and feedback that will be useful to future athletes who are able to view Alex’s reviews and ratings.

Use Case 4

Title: Contacting Universities
Actors: High school athlete (Elliot)
Description: Elliot, a high school track star, finds a university with an excellent track and field program. Elliot uses the websites feature to contact the university's athletic department for more information about scholarships and tryout opportunities. Elliot is also able to contact coaches or any of the athletic staff directly using a messaging feature.

Use Case 5

Title: Olympic Sports Enthusiast
Actors: Sport Spectator (Oscar)
Description: Oscar is a huge fan of the Olympic sports scene and is interested in learning more about the universities that have produced these athletes. The website provides smooth, quick and

intuitive access to whatever information Oscar would like to search for. He can interact with a variety of data such as medals or number of students produced by the university. Oscar can view the reviews and ratings given by other athletes or coaches but cannot leave a rating or review himself. Oscar is curious to see where these Universities are located in which the web app would provide

Section III: Data Items and Entities

- Types of Users:
    - Guest Users
        - Permissions:
            - Can only view a simplified homepage.
            - Can Register as a User
            - Can login if registered
    - Students
        - Permissions:
            - Can view all user specific pages.
        - Data Points:
            - Email
            - Password
            - First Name/Last Name
            - School Attended (university or High School)
            - Athletic Stats (Win %, Sports played, division played in)
            - Academic Stats: GPA, Major (if already a student)
    - Teachers/University Staff
        - Permissions:
            - Can view all user specific pages and University specific pages
            - Can be a University Admin Account (manage University stats/students/info)
        - Data Points:
            - Email
            - Password
            - First Name/Last Name
            - School Worked At
- Entities:
    - University
        - Data Points:
            - Map Data
                - Locations Played (If involved in certain sports)
                - University Address
            - Sports Participated In
            - Gold, Silver, Bronze medals won by student athletes
            - Notable athletes
    - Student Athletes
        - Data Points:
            - Universities Attended

- Athlete stats (win %)
- Sports Played
- Medals Won (Gold, silver, bronze)

Section IV: Functional Requirements

- General Users:
    - Access must be limited to only registration, log in and a very basic homepage with event news.
    - General unregistered users must be able to access the registration page and register as a new user.
    - General users must be able to access the login page and log in to access the rest of the website.
- Registered users:
    - Must be able to register as either a university entity, a student/General user (parent), or an instructor from a university.
    - Must be able to use map functionality to locate each university.
    - Must be able to recover lost usernames and reset lost passwords.
    - Students:
        - Must be able to send direct messages to other users/university hub accounts/teachers.
        - Must be able to search/filter for universities by sport, Olympic admission rate, win percentage, specific Olympic athlete.
    - Teachers:
        - Must be able to link their account to the university they work for.
        - Must be able to send and respond to direct messages from students.
    - Universities:
        - Must be able to create a list of student athletes and enter their information.
        - Must be able to update/add/change/delete information about athletes related to the university.
        - Must have “admin” accounts that manage university information.
- Website Requirements:
    - Must be media rich.
    - Must display events in maps and states and provide basic mapping interfaces.
    - Must verify proper email has been used to register by utilizing email confirmation.
    - Must provide login and logout functionality.
    - Must utilize proper account security (password hashing, etc.).

Section V: Non-Functional Requirements

Scalability: The system must first support up to 100 users without performance delays. Supports up to 1000 users after 6 months, and then 10000 users after 1 year.

Security: The user data transmitted over the website will be encrypted using TLS 1.1 or higher. The system shall comply with data protection regulations to protect user privacy.

User-friendly: The website shall be designed using a “three-click rule” where users can access any information from the index page with a max of 3 clicks.

Reliability: The system must be operational 24/7 with maintenance once a week that is no longer than 12 hours.

Compatibility: The system shall be accessible using most major web browsers like Chrome, Firefox, Safari, Edge

Recovery: There shall be a recovery plan.

Section VI: Competitive Analysis

Feature	Olympains & Paralympians Table	OMHPMH Historic Database	Olympian Database	Podium Scholars
Search by School	✓	✗	✗	✓
Filter by Sport	✓	✗	✓	✓
Data Analytics for Geographical Distribution	✗	✗	✗	✓
School Rating System	✗	✗	✗	✓

Sources:

- Olympians & Paralympians Table
- OMHPMH Historic Database
- Olympian Database

From those publicly available applications, none actually accomplish what Podium Scholars sets out to do. The majority of products available don't offer a way to sort through the information that our application plans to do. We not only plan to incorporate filtering by school and sport like our competitors, but by integrating planned filters (such as states and medal placements) with analytical visualizations of the requested data our product plans to provide our target audience a better picture of the athletic profiles of the schools. Not only do the other available resources not allow sorting to identify prospective universities, some have user interfaces that make finding the desired information more difficult than it needs to be. Lastly, our product aims to provide the target user the tools needed to make the appropriate decision for their planned university, such as a school rating system that is not only visible to them but to the prospective university as well.

Section VII: System Architecture and Technology

Technologies Used:

- Server Host: AWS 15 GB
- Operating System: Ubuntu Linux 22.04
- Server-side Language: Javascript ES6
- Database: MySQL 8.3

Other:

- IDEs: VSCode
- Web Framework: Express.js
- SSL Cert: AWS Certificate Manager
- HTML 5
- CSS3
- TypeScript

Section VIII: Team and Roles

Team Lead: Lei Woods
Front-End Lead: Chunyin (Alex) Chan
Back-End Lead: Mila Avagimova
Git Manager: Elliott Bullard
Front-End: Oscar Galvez
Back-End: Eric Kunzel
Database Management: Riel Orque

Section IX: Checklist

Team Found a time slot to meet outside of class — Done
Github master chosen — Done
Team decided and agreed on using the listed SW tools and deployment server — Done
Team read and able to use chosen back and front end frameworks — Done
Team lead ensured that all team members read the final M1 and agree/understand it before submission — Done
Github organized as discussed in class. — Done

Section X: History Table

Submission Date:	**Revision Date:**	**Revisions Made:**
02/27/2024		