

MICHIGAN STATE
UNIVERSITY

Project Plan

Gamifying GameChang3rs

The Capstone Experience

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From Students...
...to Professionals

Functional Specifications

- GameChang3rs is a program where volunteer high schoolers mentor elementary school students in building their legacies.
- The main goal of this project is to provide supplemental material for the GameChang3rs program.
- Provide web games themed around Michael Sadler's Six Pillars to keep kids engaged in building their legacies.

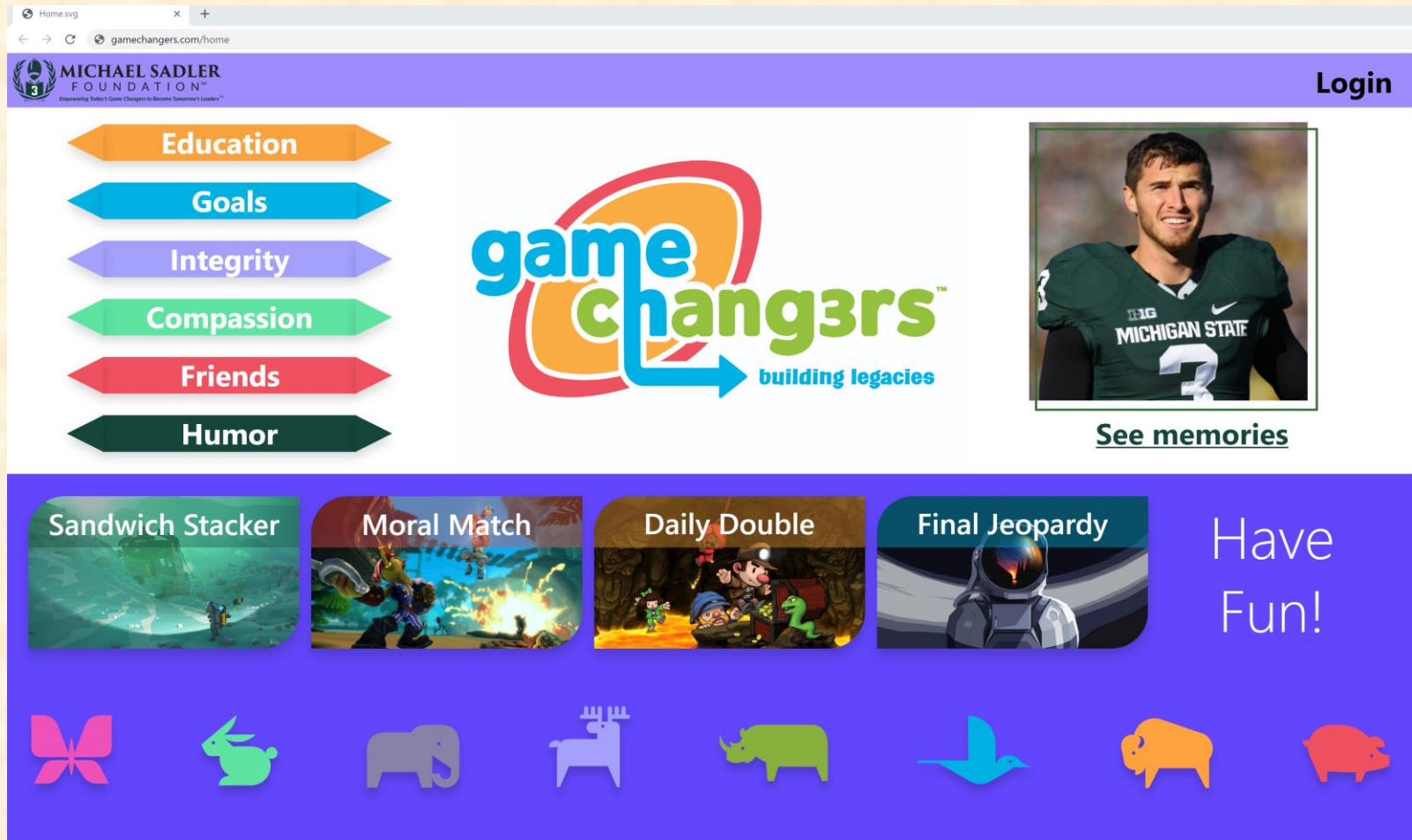


Design Specifications

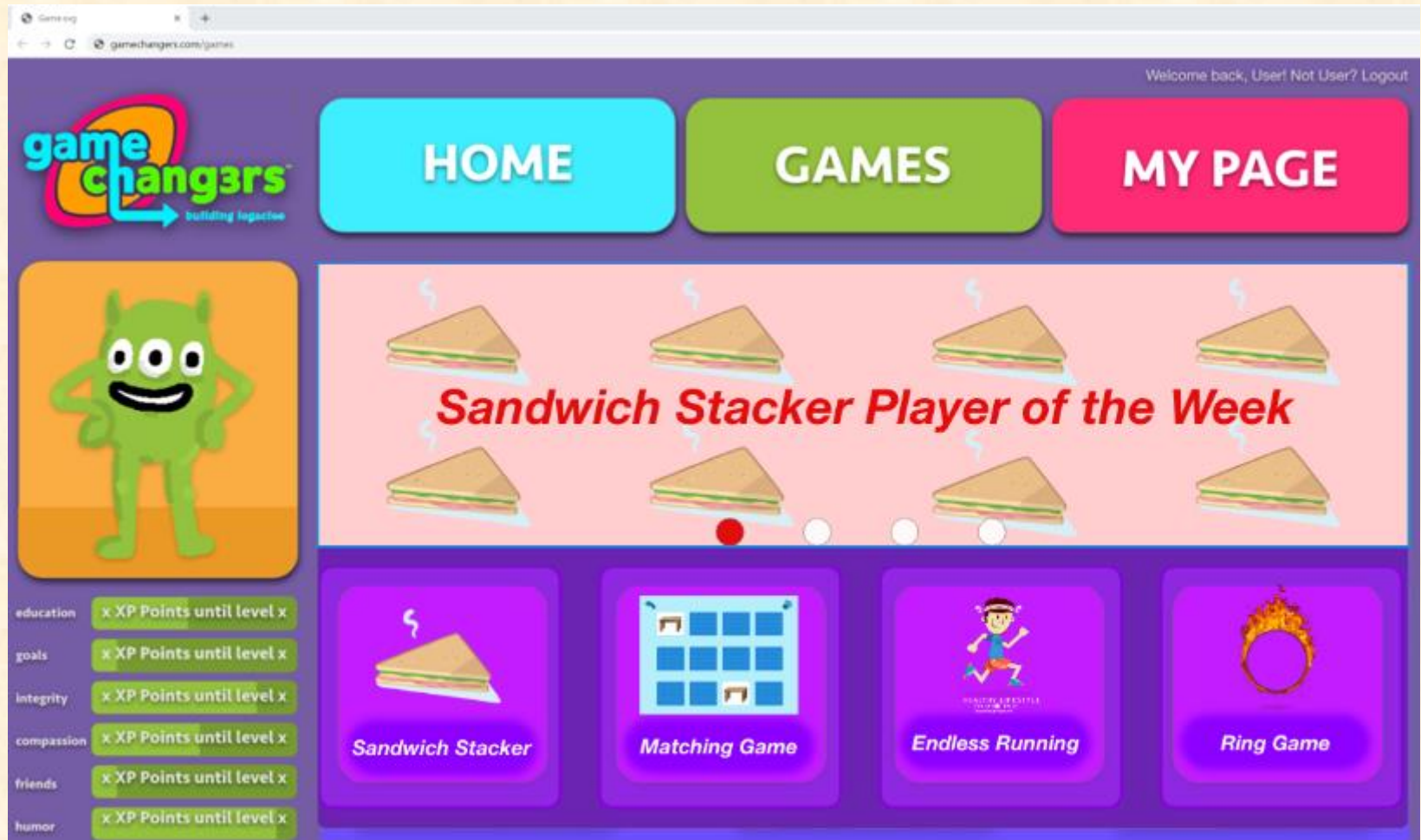
- Users on our website will be able to play multiple mini-games that are fun, competitive, and educational, in which the games will teach them about Michael's 6 Pillars.
- An example of one of the games that will be on the website would be a memorization card game where the player must match cards of the same picture.
- They will also have a personal avatar that they can customize by spending "Legacy Points" (our websites point system).
- The Foundation and ambassadors will be able to view site traffic along with statistics about how often the games are being played.



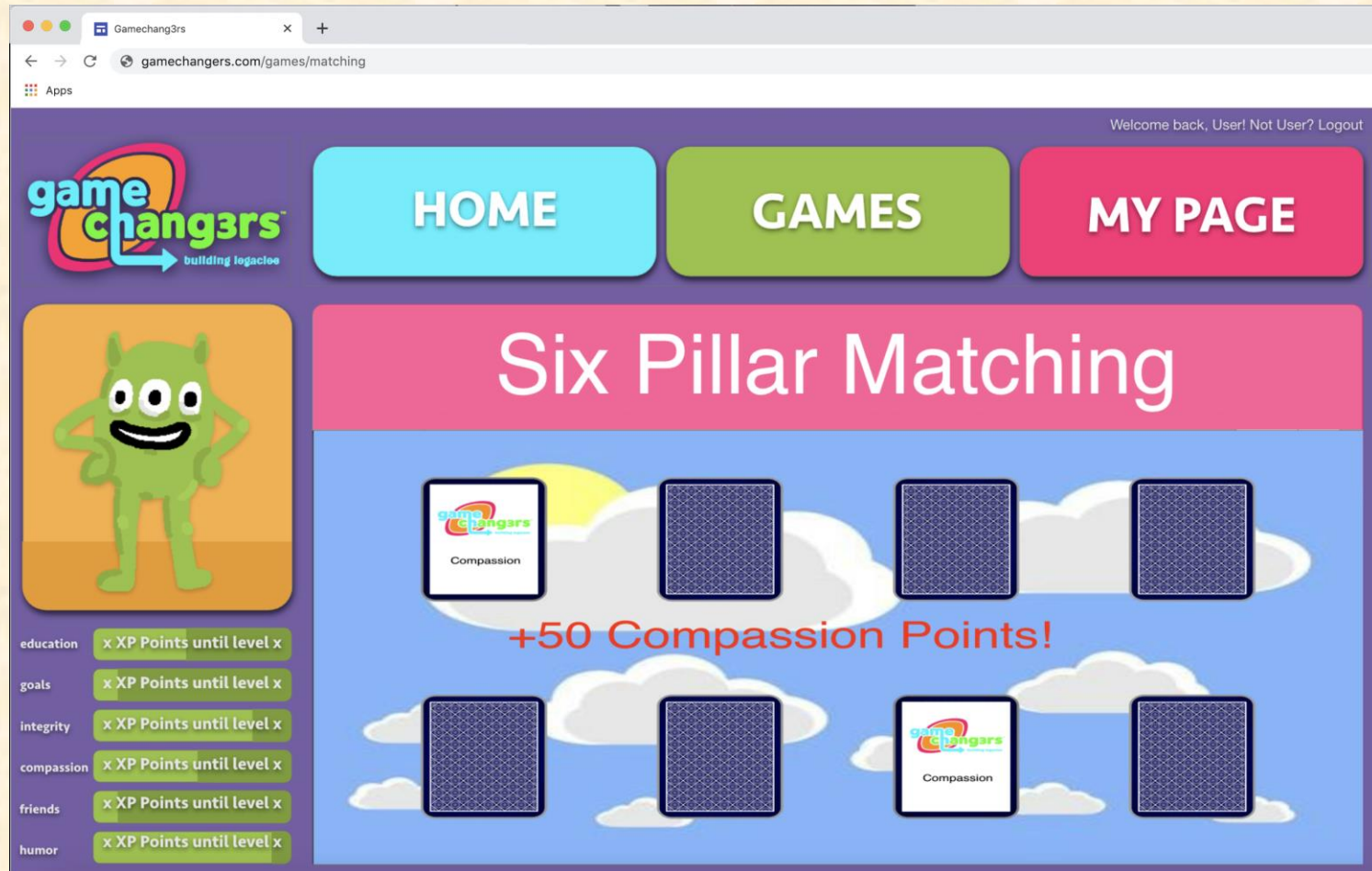
Screen Mockup: Home Page



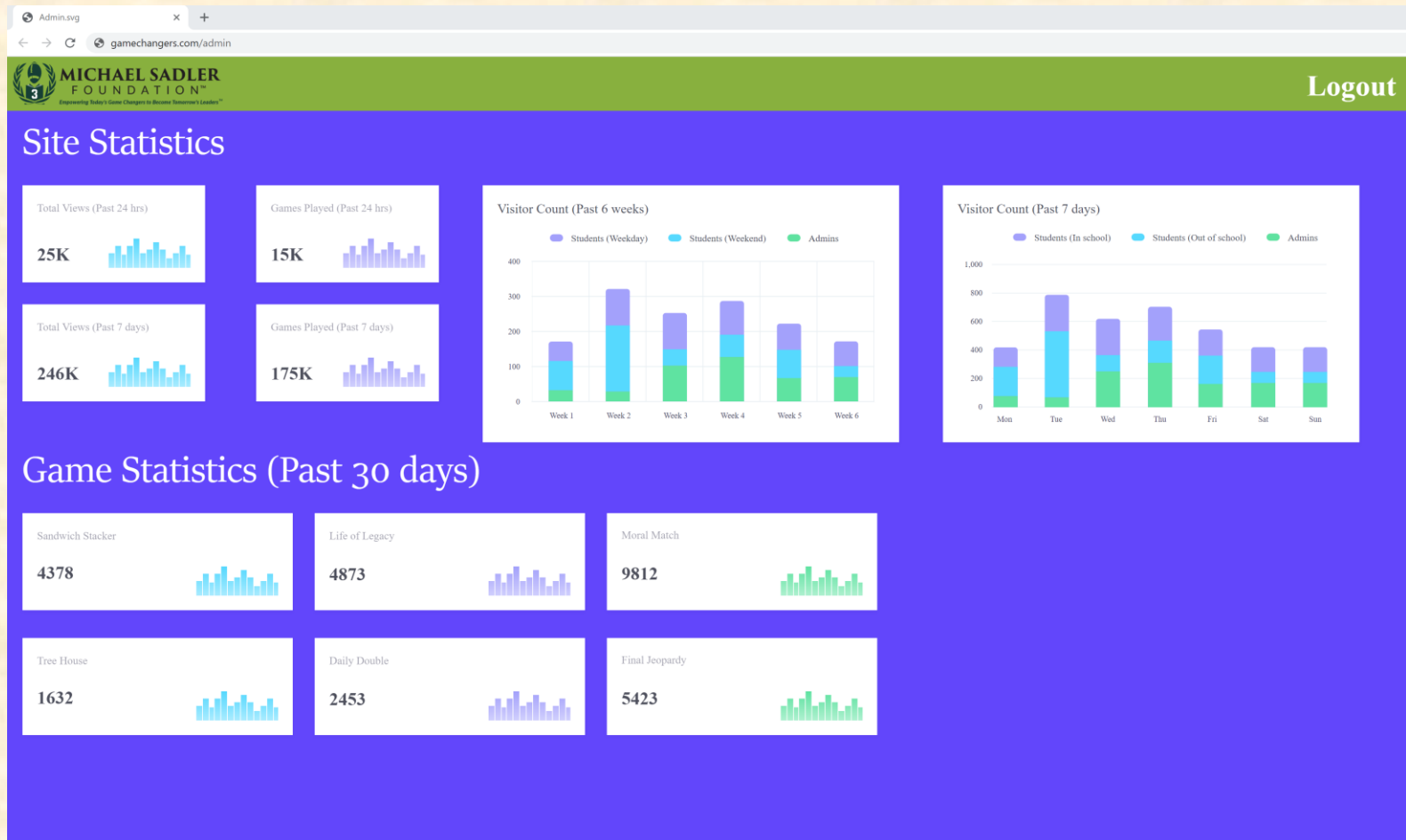
Screen Mockup: Games Page



Screen Mockup: Game Page/Matching Game



Screen Mockup: Administrator View

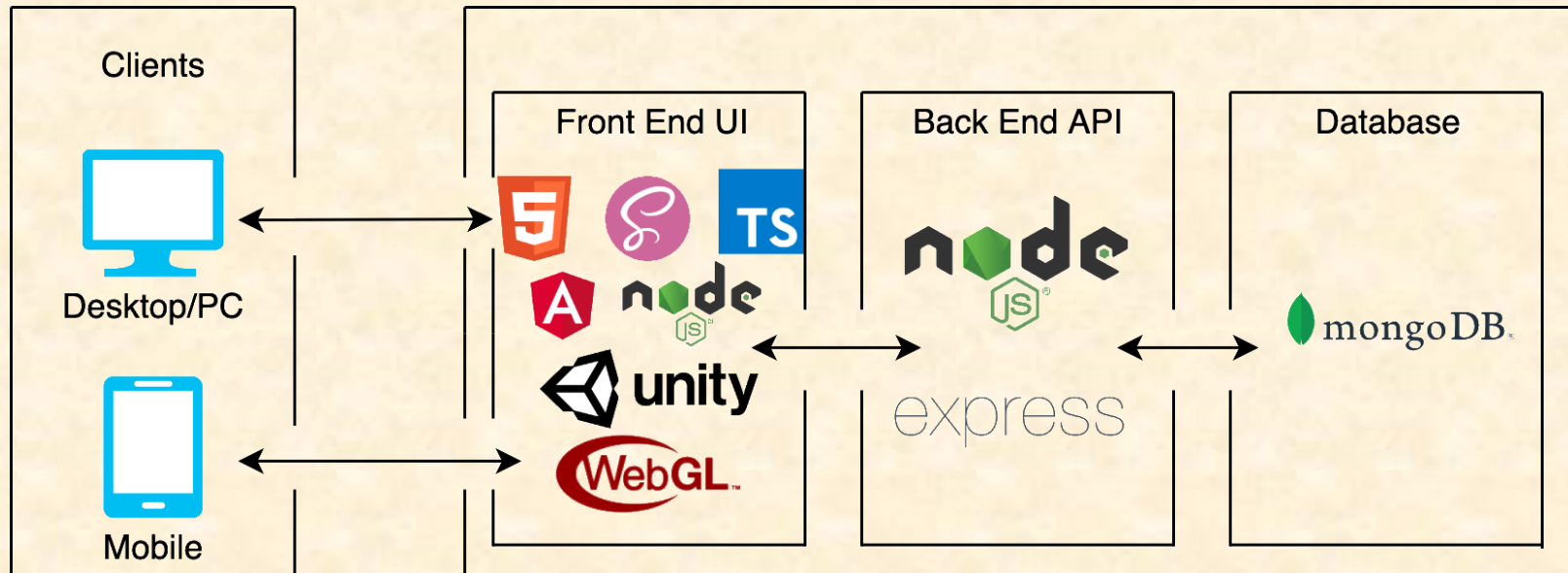


Technical Specifications

- C#
- HTML / SCSS
- JavaScript / TypeScript



System Architecture



System Components

- Hardware Platforms
 - None
- Software Platforms / Technologies
 - Unity
 - Angular
 - WebGL
 - Visual Studio 2019
 - MongoDB

Risks

- Risk 1 – FERPA and User Security
 - The Family Educational Rights and Privacy Act (FERPA) is a federal privacy law that protects the student's information and prevents anyone from accessing that information unless given permission to do so.
 - Our attempt to mitigate this is to have either have the user create a username that doesn't have any connection to themselves or have a button that randomly generates a username, given a list of usernames.
- Risk 2 – Difference between user's age and game designer's age
 - For this project we are making a game that is meant to be played by children and young teens from the age range 7-14 years old, while we are in our early 20s.
 - To mitigate this risk, we are going to ask for feedback from people in that age range and by doing research on games that are popular for that age group. We are also going to have people in that age range play test our games.
- Risk 3 – Feedback from appropriate age group
 - Trying to find children and young teens that are willing to play test our games.
 - Talk with the client to see if we can send out early versions of our games and have the students play test them for any bugs or just to see if the game would be entertaining.
- Risk 4 – Cohesion between art and game styles across game site
 - Our group is not being provided any art or graphic assets for any of the games that we will produce, and we are also not being provided any previous games that the foundation has used. This gives us complete freedom to create games in any style, but we must choose a style or multiple styles that fit together cohesively.
 - We can create mockups before implementing actual game components, and discuss which styles we like and dislike amongst ourselves and the clients



Questions?

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