

Milestone 6 Evaluation

1. FIT History Tours App
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 - Grant Butler, gbutler2020@my.fit.edu
 - Matthew Tokarski, mtokarski2018@my.fit.edu
 - Tyler Zars, tzars2019@my.fit.edu
2. Faculty Advisor: Fitzroy Nembhard, fnembhard@fit.edu
3. Client: Ryan Stansifer, ryan@fit.edu , Florida Tech Computer Science Department
4. Progress of current Milestone (progress matrix)

Task	Completion	Grant	Cam	Matt	Tyler	To Do
Build Out Historical Database	95%	0%	5%	85%	5%	
Trivia UI Implementation	100%	50%	40%	0%	10%	
Game Question Generation	100%	15%	20%	35%	30%	
Begin Other Game Implementation	100%	100%	0%	0%	0%	
Add Map Layovers	100%	0%	90%	10%	0%	
Implement Settings/Sharing Menu	100%	0%	80%	0%	20%	
Create Campus Tours	100%	0%	0%	0%	100%	
Clean Up the User Interface	100%	25%	25%	25%	25%	
Add Debug Options	100%	0%	0%	0%	100%	
Conduct System Test	100%	25%	25%	25%	25%	
Create User/Dev Manuals	100%	10%	10%	10%	70%	
Create Demo Video	100%	33%	33%	33%	1%	

5. Discussion (at least a few sentences, ie a paragraph) of each accomplished task (and obstacles) for the current Milestone:
 - **Clean Up the User Interface:** The web application had a bunch of old filler code and outdated CSS that didn't match the overall flow of the application. We worked to ensure that the CSS styling was matched across the different pieces of the application and that any other leftover code was removed.
 - **Add Debug Options:** We hid the debug options away from user eyes by hiding the various items behind menu options. The debug option can be re-enabled by updating the client side CSS to disabled the 'class="map-sidebar"' display element. This sidebar shows the users latitude, longitude, zoom, and whether or not the user is in the bounds of Florida Tech.
 - **Conduct System Test:** We started by setting up a test environment that replicated the production environment as closely as possible. Then, we used a combination of automated and manual testing techniques to ensure that the application's Mapbox integration was functioning properly for the main homepages features (Geolocation, Directions, and Map Container). The menu bar was tested to ensure all redirections worked properly along with other components such as trivia. We tested the page on mobile and desktop using Google Lighthouse with an average 90 overall on desktop and 70 overall on mobile.
 - **Create User/Dev Manuals:** The user manual was developed to make sure that users have a solid demonstration of all pieces of the application. With pictures included, each part of the application is broken down into subsections with easily readable blurbs about features and how to use them. The developer manual focuses on the technical aspects of each part of the application. Each file is broken down with a description and those files that contain code (.jsx) have major functions and variables broken down.
 - **Create Demo Video:** The video demo was developed to show off the main features of the application including tours, routing, trivia, and the historical timeline. The video was kept short and concise to cover all the pieces of the application without diving into too much detail about how each individual piece functions.
6. Discussion (at least a few sentences, ie a paragraph) of contribution of each team member to the current Milestone:
 - **Grant Butler:** For this milestone I worked to redo the map implementation to use the `useContext` hook to allow for the same instance to be called and allow for the scavenger hunt to route to a POI so that a user can be prompted. I also worked with the historian to acquire historic images and begin to implement them into the application as popups for the points of interest.
 - **Tyler Zars:** For this milestone I wrote a majority of the user and developer manual making sure to document all of the pieces that the user interacts with and breaking down all of the files and methods in the developer manual. I also reformatted all the YAML trivia questions into JSON with incorrect answers for

each question. Along with this I did some general upkeep on the application to maintain the package version, add debug options, and update the tours with names corresponding to the waypoints in the desired tour.

- **Cameron Miskell:** I contributed to this milestone by helping out with cleaning up the website interface, altering some of the CSS and structure of the page to hopefully improve flow of use. Also, I assisted in the full system test, as we ran the application through our various metrics and verified proper functionality of implemented features. Lastly, I worked to update the dynamic loading of timeline information such that when a user is allowing the application to track their location, the timeline will update based on proximity to the labeled points of interest and display the most relevant history to nearby locations.
- **Matthew Tokarski:** My focus for this milestone was to take all the research I accumulated over the course of this project and make sure it's all in the correct places either in the timeline, at a specific POI or both. Also I've been reviewing everything for accuracy and making sure that there are no spelling or grammatical errors. I've also been gathering more research as I'm constantly finding more stuff, but now since the project has a good amount of research, I've been shifting focus to quality over quantity.

7. Plan for the next Milestone (task matrix)

Task	Grant	Cam	Matt	Tyler
SKIP	SKIP	SKIP	SKIP	SKIP

8. Lessons learned (at least a few sentences) during the project.

- Start with a solid foundation: Before you start building your React app, it's important to make sure you have a solid understanding of the basics of React, including the component architecture, state management, and lifecycle methods.
- Use a consistent coding style: Consistency is key when it comes to writing code, especially when working on a large project with multiple developers. Establishing a consistent coding style early on can help ensure that everyone is on the same page and can make it easier to maintain and refactor code in the future. Consider using a linter and enforcing a set of coding guidelines to ensure consistency.
- Make use of testing and debugging tools: As you build your React app, it's important to use testing and debugging tools to catch bugs and ensure that everything is working as expected.
- Consider performance optimizations: React apps can be resource-intensive, so it was important to consider performance optimizations in our app. This can include techniques like code splitting, lazy loading, and using server-side rendering. We used tools like Google PageSpeed Insights to identify potential performance issues and optimize the app accordingly.
- Choose the right hosting provider: When it came to deploying our React app, it was important to choose a hosting provider that can meet your needs in terms of

scalability, reliability, and cost. DigitalOcean is a popular option for hosting web applications, with flexible pricing plans and robust infrastructure that can handle high traffic loads while integrating CI/CD. Make sure to research your options and choose a provider that best fits your needs.

- Automate your deployment process: Automating our deployment process saved time and reduced the risk of errors when we deployed our React app. Tools like Docker helped automate our deployment pipeline, making it easier to deploy updates and manage our infrastructure. We used continuous integration and deployment tools with Github Actions and DigitalOceans integration to constantly build and test the app with every code update.

9. Date(s) of meeting(s) with Client during the current milestone: 04/17/2023

10. Client feedback on the current milestone

- Allow users to hide/show different components of the web app, like the map, timeline, etc.

11. Date(s) of meeting(s) with Faculty Advisor during the current milestone: 04/17/2023

12. Faculty Advisor feedback on each task for the current Milestone

- Allow for users to replay the same trivia questions. Otherwise, upon answering a question give feedback to the user on whether or not they chose the correct answer.
- If the user turns on geo-location after the tour has started, update the origin point of the tour to their current location.

13. Faculty Advisor Signature: _____ Date: _____

14. Evaluation by Faculty Advisor

- Faculty Advisor: detach and return this page to Dr. Chan (HC 214) or email the scores to pkc@cs.fit.edu
- Score (0-10) for each member: circle a score (or circle two adjacent scores for .25 or write down a real number between 0 and 10)

Grant Butler	0	1	2	3	4	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10
Matt Tokarski	0	1	2	3	4	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10
Cameron Miskell	0	1	2	3	4	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10
Tyler Zars	0	1	2	3	4	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10

- Faculty Advisor Signature: _____
- Date: _____