Lightning Talk 3

FLUTR - TEAM 11

PROJECT OVERVIEW

- The existing RG Butterfly app requires rebuilding.
- Track butterfly shipments and releases for the Christina Reiman Butterfly Wing, share data with the public.
- The goal is to create a new application with a shared backend for global institutions and individualized frontends
- Multilingual support is desired for global usability.
- The kiosk in the Butterfly Wing was damaged during COVID. Replacement parts and rebuilding of the unit is needed.

PROJECT MANAGEMENT & JUSTIFICATION

Project Management:

- Split project into sprints based on features to implement
- Split team into hardware (kiosk), software frontend, and backend

Justification

- Data management of butterfly shipments and releases
- Data sharing between multiple institutions
- Provide users with information to enhance their experience

TASK DECOMPOSITION (high-level)

As we have multiple different parts, we've split the task decomposition into two categories

App Creation

- Create basic website hosted on DigitalOcean (Including React and Springboot)
- Create employee butterfly tracking system
- Create visitor frontend UI system (including maps, graphs, and stats about butterflies in the house)
- Deploy app to Kiosk and test

Kiosk

- Research components for Kiosk use (cooling system, CPU)
- Configure Kiosk for visitor usage (minimize permissions)
- Install components into Kiosk
- Install Kiosk into flight house and test

KEY MILESTONES, METRICS, EVALUATION CRITERIA

Task	Milestone	Date (week of)	Metrics
Kiosk	Research and finalize components	March 25, 2024	Within budget, space, and environment constraints
	Configure kiosk software for visitor experience and security		User-friendly, securely allows admin access, visually pleasing
	Installation of updated components and software	April 22, 2024	Works without excessive power draw, heating
	Installation of kiosk in flight house and testing	May 6, 2024	Approval from client based on climate-friendliness and user feedback

KEY MILESTONES, METRICS, EVALUATION CRITERIA

Task	Milestone	Date (week of)	Metrics
Website	Research and finalize backend, frontend, and database choices	May 13, 2024	Level of proficiency of team, existing options, compatibility
	Build wireframes, build basic website and host on web service		Efficiency of requests, response times, aesthetics
	Create release and shipment tracking system, create visitor frontend UI	September 23, 2024	Efficiency for employees during tracking, user access administration, visually pleasing for visitors
	Deploy website to flight house for tracking, releases, and kiosk for testing	October 28, 2024	Approval from client based on ease-of-use and user feedback

KEY RISKS AND RISK MITIGATION STRATEGIES

Risk	Mitigation
Accidentally Create incompatible frontend and backend	Extensive preplanning that displays how each interaction between frontend and backend will work
In our attempts to “make it cool” as Nathan wants, we end up using a fancy new technology that doesn’t last long.	Thorough research and use modern technologies that have already proven the test of some time.
Some hosting solutions can cost a lot if configured incorrectly.	Be sure that the service we use to host the site is budget friendly and works for our specific need.
Our solution to replace and cool the Kiosk may not be adequate.	Complete this portion of the project before the summer so there is plenty of time to troubleshoot in the event of failure.

CONCLUSIONS

- Testing as much as possible at Reiman will make the deployment to other facilities smoother
- Factors such as usability and translation are essential to deploying this software globally
- Researching kiosk components and testing will ensure our solution is weather resistant and will last long term
- Splitting our team into groups with a singular leader will help us divide and conquer multiple tasks
- If done correctly, we will be able to help global facilities share data and learn from each other, while also enhancing guest experience