

S E 4 9 1

Lightning Talk

Jack-o-Lantern Spirits in the Gardens

Group 1: Kyle Goben
Kiara Sta. Maria
Omar Muhammetkulyyev
Phuoc (Johnny) Nguyen

PROJECT PLAN

Project Plan

Task Decomposition

Schedule and Milestones

Risks and Risk Mitigation

Personnel Effort Requirements

Project Plan

- Using Agile project management style
- Weekly Sprints
- GitLab to track our progress and tasks on the project



Task Decomposition

Frontend

1. Create screen sketches for the admin and volunteer sides of the application.
2. Implement UI for the Volunteer Stencil Logging application using React
3. Implement UI (Stencil Library and Event Management) for the admin side using React
4. Implement the Stencil Recognition screen for event visitors

Task Decomposition

Backend

1. Define database schemas for stencils and event
2. Establish a secure connection to the database
3. Implement endpoints to allow creation and update of stencils and events.
 - a. Create controllers to process the CRUD operations of stencils and events.
 - b. Set up the request handlers that map to the appropriate controllers
4. Implement the necessary middlewares that are needed to process and store the images

Task Decomposition

Testing

1. Ensure that the volunteer and admin sides of the application are working as expected.
 - a. Test functionality of the UI components with Jest or React Testing Library.
 - b. Test functionality of the backend APIs and controllers.
 - c. The preliminary user test will be done during this year's event.
2. Based on testing results, add enhancements or edit features as deemed necessary.

Schedule and Milestones

Milestones:

1. Set up development environments for both front and backend.
2. Create detailed screen sketches in Figma for the application's UI.
3. Create database schemas.
4. Set up CI/CD for the application.
5. Implement UI for the application using React.
(volunteers, admins, and visitors)



Schedule and Milestones

Milestones:

6. Implement backend API for event and stencil management.
7. Implement AI algorithm for stencil recognition.
8. Integrate frontend and backend code.
9. Deploy application into the cloud server.
10. Test the app during this year's Spirits of the Garden event.



Schedule and Milestones

Tasks	Pre-492	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Setup development environments	█															
Create detailed screen sketches	█															
Create database schemas	█															
Setup CI/CD	█															
Implement application UI code		█	█	█												
Implement backend API code					█	█	█									
Implement stencil recognition AI								█	█	█						
Integrate frontend and backend code											█	█	█			
Deploy application into cloud server														█		
Test app															█	█

Project Gantt Chart

Risks and Risk Mitigation

Risks	Risk Probability	Mitigation
Not meeting the desired deadlines due to poor allocation of time	0.2	Have weekly team meetings and bi-weekly gatherings with our client and advisor to update on our status.
Major software or hardware issues with backend/database	0.3	Working extra hours should the issue arise.
Excessive resource use when training AI model	0.5	Set limits on the resource usage and monitor the process regularly.
Model is trained incorrectly	0.6	Contact our client and others for help.

Personnel Effort Requirements

Tasks	Effort (hrs.)
Set up development environments.	10
Create detailed screen sketches.	40
Create database schemas.	5
Setup CI/CD.	5
Implement application UI code.	70
Implement backend API code.	50
Implement stencil recognition AI.	50
Integrate frontend and backend code.	20
Deploy application into a cloud server.	10
Test app.	30

Frightful and Delightful,

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big

thank you!

