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Honors Thesis Weekly Journal

2/4/2019

Accomplished this week:

- Came up with prospective ideas for the game.
- Considered potential game mechanics to complement these.

Insights:

- A good starting point for this project is to consider problems that I am personally interested in.
    - This made it much easier for me to think of how a game might solve the problem.
    - Additionally, having a decent knowledge of the problem helps in the attempt to translate the problem into game mechanics.
- I think a game that solves a social issue is probably something I'm more comfortable making, as technical problems may require more expertise to engineer a gamified solution.

Concerns:

- Scope – Making a game is hard, so I'll have to make sure that the scope of this project does not go beyond what I can do in three months.
- Misrepresentation – The game I make will have to properly represent a problem that I will not be the foremost expert in solving.

Game ideas

- Food distribution
    - A continuation of a game I made for Ethics of Food.
    - A representation of the challenge of distribution in a food system.
    - Can propose solutions by allowing the player to adjust the system to improve it.
    - May be too abstract to take into the real world.
- Physical Disabilities
    - A game to help people better empathize with people with physical disabilities.
    - I have experience with such individuals.
    - Very positive message; easy to grasp
    - Sensitive issue
    - Easily misrepresented
- How do we learn language?
    - A game where a person learns and must use a made-up language.
    - Can be used to provide insight to machine learning algorithms to help them learn abstract concepts in a similar manner to humans.
    - Very technical. I am inexperienced with machine learning.
- Gamify SETI
    - A game whose goal is to increase participation in SETI or other similar tools.
    - Users use both active an inactive computer time to contribute to SETI.
    - Likely requires permission to develop for.
    - May require deep technical knowledge to properly implement game mechanics.

2/11/19

Accomplished this week:

- Gave some thought to how to gamify the two prospective game concepts after narrowing down the list last week.
    - Food distribution could be a tower defense game
        - This was my original idea for the game
        - It adds a time element to the game that is important to the underlaying issue.
    - Physical disability game could be based on my experiences and lessons learned from working with disabled people.
        - This likely minimizes the chance of the game misrepresenting someone's perspective.
        - Still does good by encouraging people to work with disabled people as well.
        - Still too abstract of a concept.
- I believe that since the food system game is more fleshed out, it is the better choice of the two moving forward.

Next Steps:

- Come up with survey questions.
- Begin work on designing game mechanics.

In meeting:

- Tower defense
    - Make map model a city
    - Have people move on a fixed path and disappear over time.
        - Disappearing counts as "taking damage".
    - Towers can be farms, grocery stores, etc.
- "Classic Style"
    - Offer choice of path
        - Tedious, but short
        - Long, constant motion
        - Time limit to make this choice have consequences.

2/18/18

Accomplished this week:

- Made a list of potential survey questions

Potential Survey Questions (To follow Agree/Disagree format):

- I understood the message of this game.
- I learned something new by playing this.
- I felt bad when I lost/I feared losing.
- I thought this game was fun.
- I would play more of this.
- I felt responsible for helping the characters.
- I thought the game became more stressful over time.
- I like the general pace of this game.
- I would tell my friends to play this.
- I think I can teach others what I learned from this experience.
- I think this game is too hard/easy
- I think the story of this game was too confusing.
- I agree with what this game is saying/suggesting.
- I felt fine losing a few characters as long as I won the level.
- I felt like I was always in control of the situation.

Written Questions:

- What was the message here?
- Any feedback?

In meeting:

- Marked good questions for the draft of the survey.
- Add a multiple-choice question for what the potential message could be, rather that asking “I did/did not understand”.
- Discussed strategy for laying out the survey.

2/25/19

Accomplished this week:

- Created a prospective survey for IRB approval.
- Began to look at the Unity Tower Defense tutorial and consider how this could be converted into my vision for this game.

Insights:

- IRB approval should be relatively painless, as the survey is quite simple.
- I tried to format the survey in a way that the “easier” opinion questions appeared first, followed by the more philosophical questions.
- I thought it would be important to add a question to distinguish between the games that were being surveyed.
- The Unity tutorial seems easier than I remember it being, since I have a bit more experience with the platform that I did a year ago.

Concerns:

- I hope approval comes through quickly.
- I am still unsure of the best way to distribute the survey and the game to people.
- The Unity tutorial is still quite complex, and hopefully is flexible enough to handle the changes I would like to implement.

3/4/19

Accomplished this week:

- Began to work with the Unity TD tutorial.
- Thought of specific ideas for mechanical updates.
- Reconsidered timeline for the project.

Mechanical Updates:

- Have "health" diminish over time for agents.
    - When it hits 0, the player's "base" loses health.
- Add a new stat, "Nutrition" to agents.
    - Can be either a flag or a similar construct to the health bar.
    - When the bar is filled/flag is set, the agent is removed as if it were destroyed in the current version.
- Attacking vs. flying agents
    - Some agents could be treated as a food delivery system to the towers.
    - I like the idea of adding a breadth of agents to the game
- Setting up a stage.
    - Stages can include a closed loop with several spawn points for agents.
    - Each map can have varying amounts of "real estate" upon which a player can build, which can add challenge.

New Timeline

- Spring break should be reserved for the TD game, since it is a bit more involved.
- Have TD done/mostly done by the 25th of March.
- This leaves about a month for the action game and a few weeks to distribute the survey.

In Meeting

- 3 Axels to classify features:
    - Ease of implementation
    - Enhancing gameplay
    - Relevance to message

Schedule

- 3/11 – Journal review, Look at TD tutorial, list/ assessment of game mechanics
- 3/18 – Spring break
- 3/25 – Prototype demo including selected mechanics
- 4/1, 4/8 –
- 4/15 – Prototype of action style
- 4/22 – Playtesting event? + collect survey feedback
- 4/29 – Honors presentations

3/11/19

Accomplished this week:

- Began work on producing a level map.
- Digitalized my journal.
- Organized prospective features based on 3 Axels.

Prospective features:

- Health diminish over time, damage player "base" at 0.
    - Ease of Implementation: relatively high
    - Enhancing gameplay: high
    - Relevance to message: high
    - Verdict: This is likely the best starting point for a mechanic to add.
- Nutrition stat: When full, the agent is considered "destroyed"
    - Ease of Implementation: average
    - Enhancing gameplay: high
    - Relevance to message: high
    - Verdict: This mechanic goes in tandem with the previous, and thus is also very important to implement.
- Variety of agents
    - Ease of Implementation: varies, safe to assume low
    - Enhancing gameplay: high
    - Relevance to message: average
    - Verdict: A nice mechanical feature if I can justify it under the message. I just have to be careful not to make agents too complex to implement.
- Closed loop maps with several spawn points
    - Ease of Implementation: average to low
    - Enhancing gameplay: somewhat high
    - Relevance to message: high
    - Verdict: This mechanic will make the game model the situation quite well, but may make the game confusing and will require serious manipulation of spawning and despawning nodes.
- Maps restricting "real estate"
    - Ease of Implementation: high
    - Enhancing gameplay: somewhat high
    - Relevance to message: high
    - Verdict: This is a feature that will define the difficulty of each level, and as such is easy to implement. This also can be very effective in demonstrating a major challenge in food distribution that is real estate and location.