**High Level Goals**

| **Goal** | **Status** | **Notes** |
| --- | --- | --- |
| A platform that can animate cellular automata. | Accomplished |  |
| A platform that can create cellular automata. | Accomplished |  |
| A platform that can configure cellular automata rules. | Accomplished |  |
| A platform with preconfigured cellular automata rules. | Accomplished |  |
| A platform that can build state for cellular automata. | Accomplished |  |
| A platform with user accounts. | Accomplished |  |
| A platform that can share cellular automata between users. | Accomplished |  |
| A platform that can save cellular automata for users. | Accomplished |  |
| A platform that is accessible through the web. | Accomplished |  |
| A platform that contains a structure catalog to modify the state of a cellular automaton. | Unrealized |  |
| A platform that contains surreal visuals. | Accomplished |  |

**Release Plan User Stories**

Users: Viewers, Creators (Builders and Writers), Moderators

Four two week sprints

| **Priority** | **User Story** | **Story Points** | **Status** | **Label** |
| --- | --- | --- | --- | --- |
| **Sprint 1** | (1/17/2024 - 1/30/2024) |  |  |  |
| 1 | As a viewer, I want to view animated cellular automata, so that I can observe emergent behavior. | 3 | **Launched** | **animated** |
| 2 | As a viewer, I want to look at one dimensional cellular automata in one dimension, so that I can marvel at the surreal visuals. | 8 | **Launched** | **1D\_in\_1D** |
| 3 | As a viewer, I want to look at one dimensional cellular automata in two dimensions, so that I can marvel at the surreal visuals. | 2 | **Launched** | **1D\_in\_2D** |
| 4 | As a viewer, I want to use premade CA rulesets, so that I can look at surreal visuals with minimal effort. | 3 | **Launched** | **premade** |
| 5 | As a viewer, I want to look at two dimensional cellular automata in two dimensions, so that I can marvel at the surreal visuals. | 5 | **Launched** | **2D\_in\_2D** |
| 6 | As a viewer, I want to populate cells with arbitrary mouse movements so that I can look at surreal visuals without having to come up with a complicated initial state. | 2 | **Launched** | **pen** |
| 7 | As a viewer, I want to enable full screen so that I can look at surreal visuals alone. | 1 | **Launched** | **fullscreen** |
| 8 | As a viewer, I want to be able to zoom into the canvas to see the cellular automata up close | 1 | **Launched** | **zoom** |
| **Sprint 2** |  |  |  |  |
| 1 | As a creator, I want to be able to save the state of my cellular automaton. | 13 | **Launched** | **Pause** |
| 2 | As a viewer, I want to read a welcome page, so that I can understand cellular automata and what this thing does. | 1 | **Launched** | **Shader Lang** |
| 3 | As a builder, I want to use premade CA rulesets so that I can focus on building initial states. | 1 | **Launched** | **welcome/about** |
| 4 | As a creator I want to be able to pause and resume my cellular automata so I can create scenarios that play out | 8 | **Launched** | **Save** |
| **Sprint 3** |  |  |  |  |
| 1 | As a user, I want to be able to create an account via an account creation and log in page | 8 | Launched | **Account** |
| 2 | As a builder I want to have a color picker to aid my cellular automata rulesets | 5 | Launched | **Color Picker** |
| 3 | As a creator, I want to be able to use a menu to adjust the size of the canvas | 5 | Launched | **Properties UI** |
| 4 | As a creator I want to be able to publish posts for others to view on a community page | 13 | Launched | **Community Post** |
| 5 | As a builder, I would like to be notified when the IDE code for my shader did not compile properly | 3 | Launched | **Error Message** |
| 6 | As a viewer I want to be able to export the cellular automata I am viewing for easy sharing on other sites | 1 | Unrealized | **Export** |
| **Sprint 4** |  |  |  |  |
| 1 | As a builder, I want to have reusable pieces to construct my CA’s initial state, so that I can speed up my development time. | 5 | **Unrealized** | **Reusable CA** |
| 2 | As a viewer, I want to be able to use the community page to load a post to view it | 8 | **Launched** | **Community page** |
| 3 | As a viewer I want to be able to use the community page to sort the posts that I want to view | 2 | **Unrealized** | **Sorting** |
| 4 | As a creator I want the ability to delete posts when I no longer want them on my account | 3 | **Unrealized** | **Delete** |
| 5 | As a creator I want to be able to view all of my created Cellular automata so that I can resume progress on them | 8 | **Launched** | **My CA** |

**Sanity Check**

Since none of us are computer graphics or web tech experts, a lot of time allocated toward spikes is critical. However, simple cellular automata exist that will provide a foundation for the project's start. For example, one-dimensional cellular automata can be easily coded, and I believe this will quickly create a springboard for everything else. Given the complexities with hosting, databases, and user authentication, I have more concerns over the platform's sharing aspect. But overall, a simplified product (MVP) that meets the above requirements is possible given the 8-week time frame.

**Product Backlog**

| **User Story** | **Story Points** |  |
| --- | --- | --- |
| As a gamer, I want to play multiplayer games with cellular automata, so I can enjoy a fun emergent gaming experience. | 21 |  |
| As a builder, I want to have reusable pieces to construct my CA’s initial state, so that I can speed up my development time. | 5 |  |
| As a builder, I want to have reusable pieces to construct my CA’s initial state, so that I can speed up my development time. | 5 |  |
| As a creator I want the ability to delete posts when I no longer want them on my account | 3 |  |
| As a creator I want the ability to delete posts when I no longer want them on my account | 8 |  |