**Key User Stories and Acceptance Criteria**

**1.1 animated:** As a viewer, I want to view animated cellular automata, so that I can observe emergent behavior.

* Dynamic pixel locomotion
* Follow defined ruleset
* Fast state transition performance

**1.4 pen:** As a viewer, I want to populate cells with mouse movements so that I can look at surreal visuals without having to come up with a complicated initial state.

* Pixel precise drawing
* Square brush type
* Change brush size
* Unable to draw while the menu clicked

**2.1 save:** As a creator, I want to be able to save the state of my cellular automaton.

* Upload state and properties to the server
* Retrieve state and properties from the server

**2.3 shader language:** As a builder, I want to write CA as a shader language so that I can create my own performant CAs.

* IDE to develop code
* Compile into GLSL code
* Animate CA with Rule from GLSL code

**Known Problems**

* [**Known Bugs - Emergent Playground Doc**](https://docs.google.com/document/d/1LzysKqhdwvRt3IXT5x0hZy2C-SUptdCJZscYnrlj-Bs/edit?usp=sharing)
* Zooming in and out manually does not update the zoom slider value

**Product Backlog**

* Users able to delete their own posts
* Thumbnail for community posts showing the saved state of the CA
* Option for post owner to toggle the visibility of each of their posts
* Improve performance of the circle brush type
* Preset CA state cell shapes to construct with
* Comments on posts
* Verify email address when registering
* Custom GIF background for Welcome Page