Data Visualization
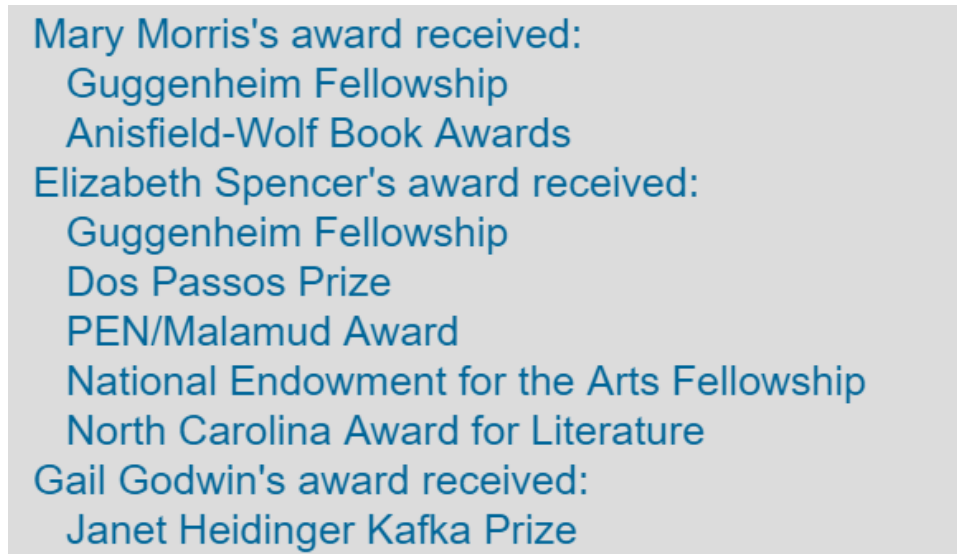
1) In p5js: simple examples

- Visualize through text (show a list of director names) -- csv file
   (Data: films whose "language of work or name"are English)
 (README done)

Kazuo Yamazaki
James Keach
Roscoe Arbuckle
Buster Keaton
Ron Oliver
Reginald Barker
A. Edward Sutherland
Charlie Chaplin
Frank Borzage

- Visualize through text (show a list of data with different properties, ex:
   occupation, award received, natable works...) -- read json file
   (Data: American female novelist)
 (README done)

Mary Morris's award received:
   Guggenheim Fellowship
   Anisfield-Wolf Book Awards
Elizabeth Spencer's award received:
   Guggenheim Fellowship
   Dos Passos Prize
   PEN/Malamud Award
   National Endowment for the Arts Fellowship
   North Carolina Award for Literature
Gail Godwin's award received:
   Janet Heidinger Kafka Prize

- [Visualize through images (show image grids of movie posters)](#) -- image number < 49
- [Visualize through images (show image grids of movie posters)](#) -- unlimited image number

   (Data: films whose "language of work or name" are English)

(README done)

- [Visualize through graph (bar graphs showing movie production years)](#)

   (Data: films whose "language of work or name" are English)

(README done)
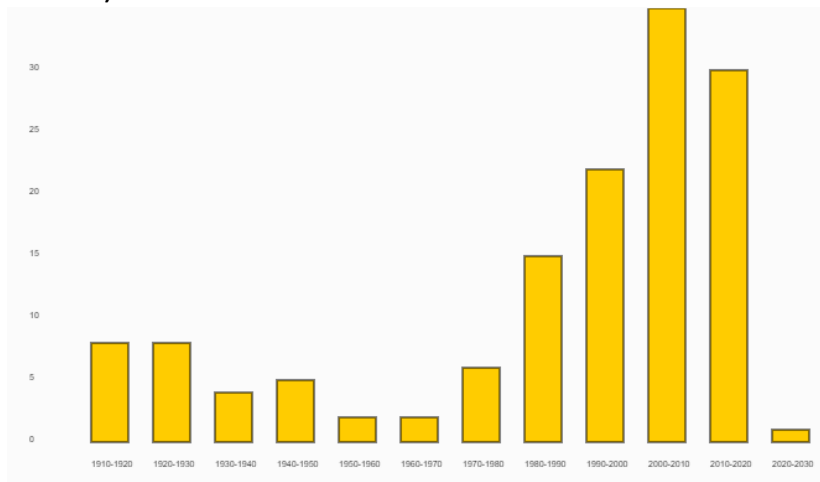
- [Visualize through 3D graph (with camera control, can't be viewed in headset)](#)
- [Visualize through 3D graph (can be viewed in headset)](#)

   (Data: films whose "language of work or name" are English)

   (Demo video link: https://drive.google.com/file/d/1QtyRChNN3-
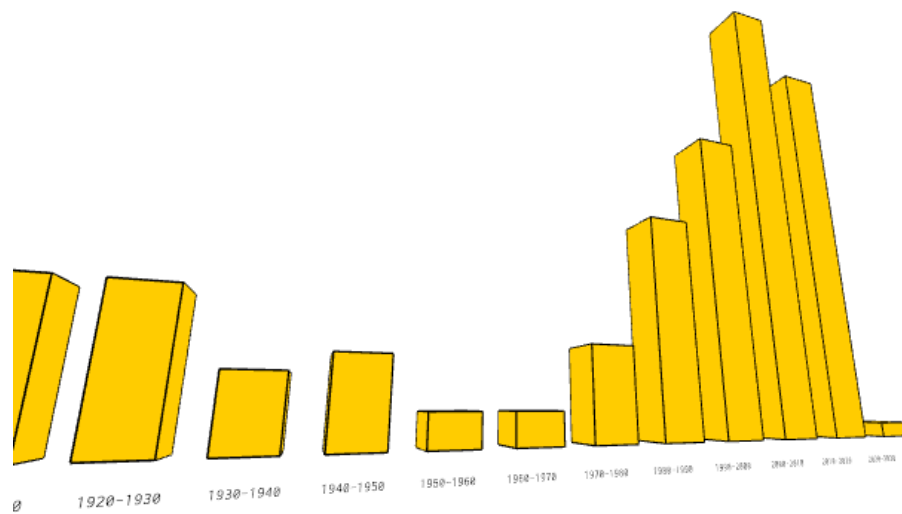
2) In glitch: complex examples

Web version

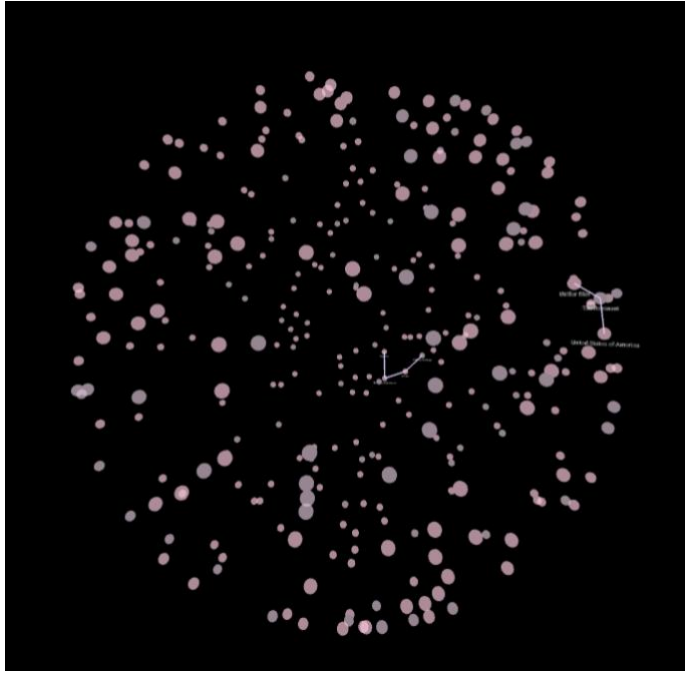- [Visualize the connections between movie data (ex: pub date, director, genre...)](#)
  VR headset version
- [Visualize the connections between movie data (ex: pub date, director, genre...)](#)
        (Data: films who received "Academy Award for Best Director")
        (Demo video link: https://drive.google.com/file/d/1-09VV9r_TO9r-NgjPV_vKMmsPYjkZ2c4/view?usp=sharing)

Web version

- [Visualize geographic data and connection between language data](#)

VR headset version

- [Visualize geographic data and connection between language data](#)
(In this example, there are two modes: static and interactive. Press the space bar to switch between two modes. In interactive mode, the sphere located in each country can be clicked. Once the sphere is clicked, the program will draw a curve between itself and the other countries that speak the same language. Press Q will remove the current curves and allow you to continue to click other spheres.)
(Demo video link: https://drive.google.com/file/d/1rOpTpR0ifcz5f5O1c1WDLrsvsS0o4zCU/view?usp=sharing)
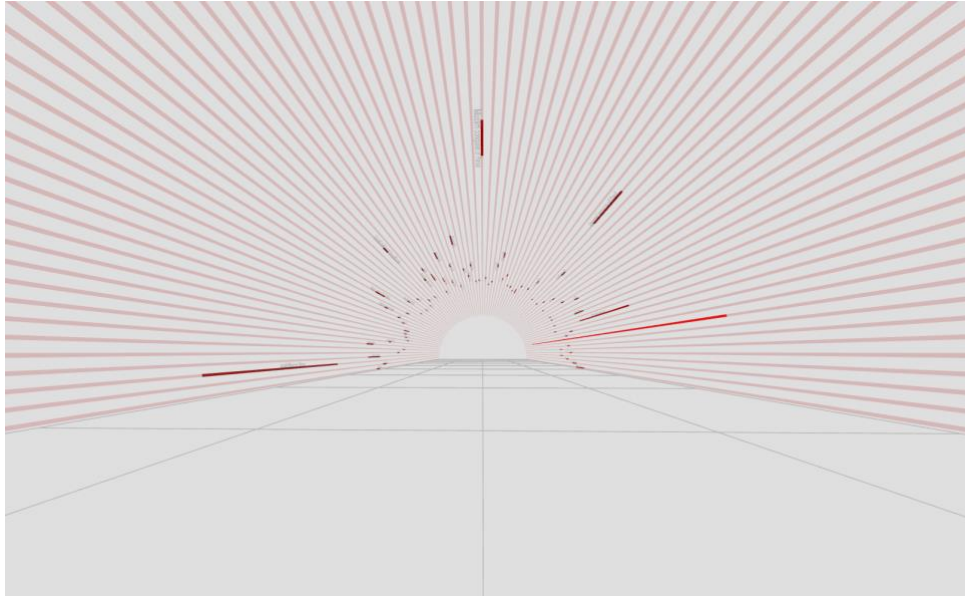
Web version

- [Visualize 3D timeline (show war start year, end year, the number of countries involved)](#)

VR headset version

- [Visualize 3D timeline (show war start year, end year, the number of countries involved)](#)

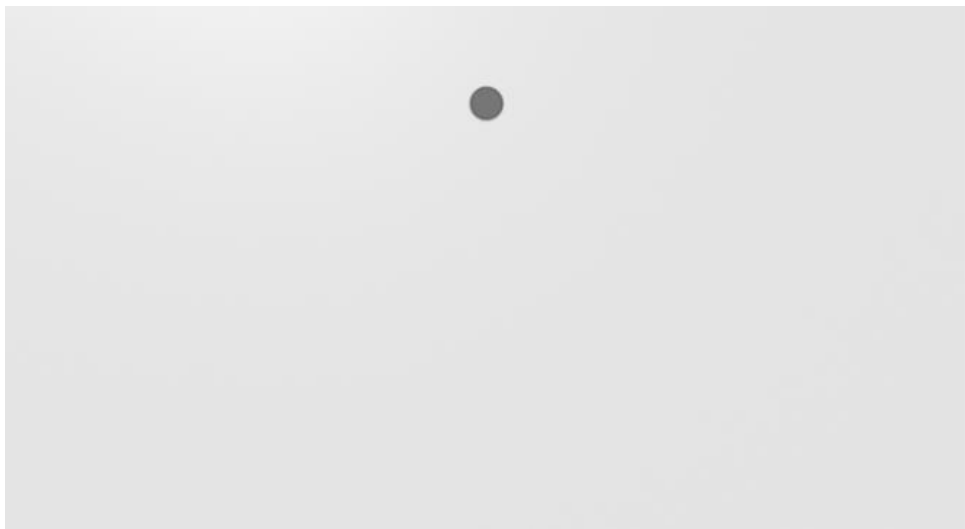(Demo video link: https://drive.google.com/file/d/1VKvY9ZpQimynHdChxWQItfGGob3F-BIr/view?usp=sharing)

Integrate p5js and Glitch

1) Get the content of the p5js canvas and draw in on glitch canvas.

Then use glitch canvas as material

- [Simple animation in p5js](#)
  (README done)

2) Get real time data using p5js and show the data in virtual

environment

- Simpliest version (only showing one data)

(README done)

- Complex version (include 3 different canvas – 1 is poster image, 1 is real-

time temperature data, 1 is real-time covid rate data)

- **Separate Version**
  - Weather - single data (README done)
  - Weather – multiple data

city	Taipei	London	New York
local time	2022-04-09 2:31	2022-04-08 19:31	2022-04-08 14:31
last updated	2022-04-09 02:15	2022-04-08 19:15	2022-04-08 14:15
temperture(f)	68	50	59

- Covid - single data (README done)
- Covid – multiple data

country	UK	Taiwan	USA
last_updated	2022-04-08T17:41:20.655Z	2022-04-08T18:03:16.973Z	2022-04-08T17:58:55.797Z
death_rate	1.7888999875945326	5.197453803844015	1.6151003419384327
recovery_rate	80.65707406984976	93.80137197948211	75.82778549752362

- [Movie poster](#) (README done)

AR in VR

1) AR in VR - one canvas (README done)

   AR in VR - multiple canvas

   (Data: American female novelist, films whose "language of work or name" is English)
   (Demo Video link: https://drive.google.com/file/d/1VTJfZkBsi6pfshDKCHhM1I20r0zKJ3K2/view?usp=sharing
   (README.md:

Open WebXR project with headset plugged into the PC

Readme file:

Virtual television & Projector (VR and AR)

1) AR examples

(Demo video:
https://drive.google.com/file/d/1hLceyLgTzDljqQTgtTDRiD_Duweq60UY/view?usp=sharing)

    - AR television with canvas screen (README done)
    - AR television with image screen (README done)
    - AR television with video screen (README done)
    - AR projector with canvas screen (README done)
    - AR projector with image screen (README done)
   - AR projector with video screen (README done)

2) VR examples

    - VR television with canvas screen (README done)
    - VR television with image screen (README done)
    - VR television with video screen (README done)
    - VR projector with canvas screen (README done)
    - VR projector with image screen (README done)
    - VR projector with video screen (README done)

Memory Palace

1) Memory Palace

(Demo Video link:
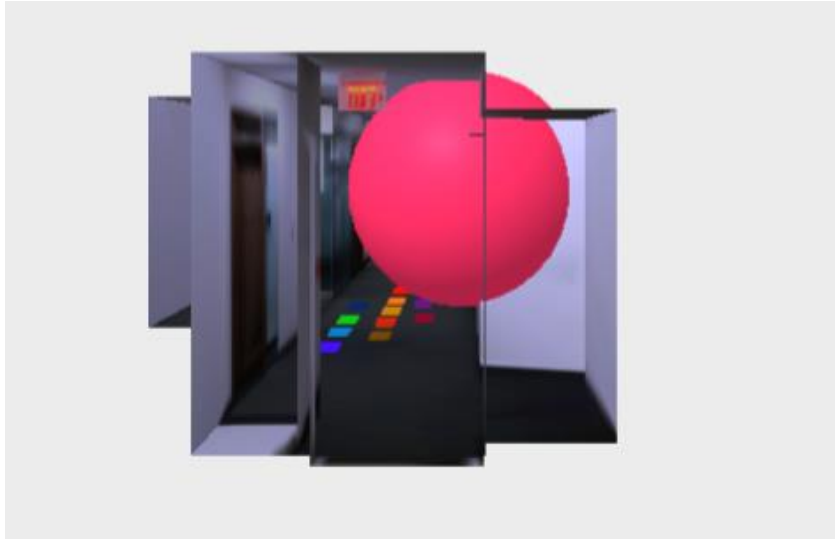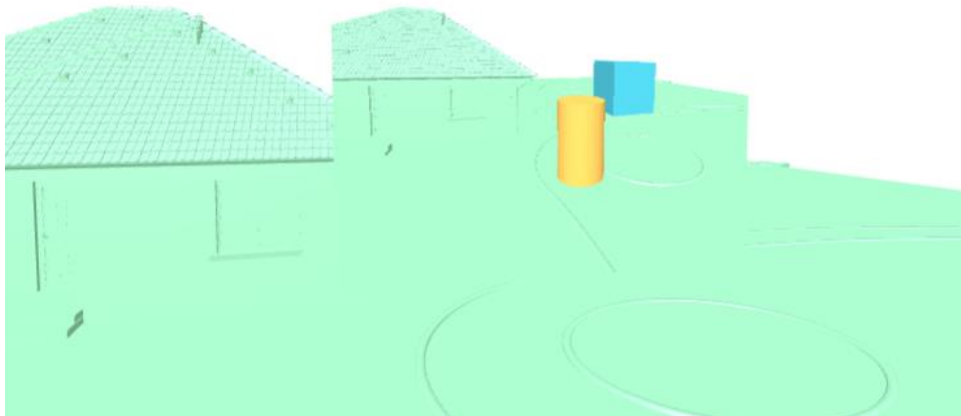https://drive.google.com/file/d/1WEAmbjE9PUNqweIFvO6uLIfpwOhYcRyP/view?usp=sharing)
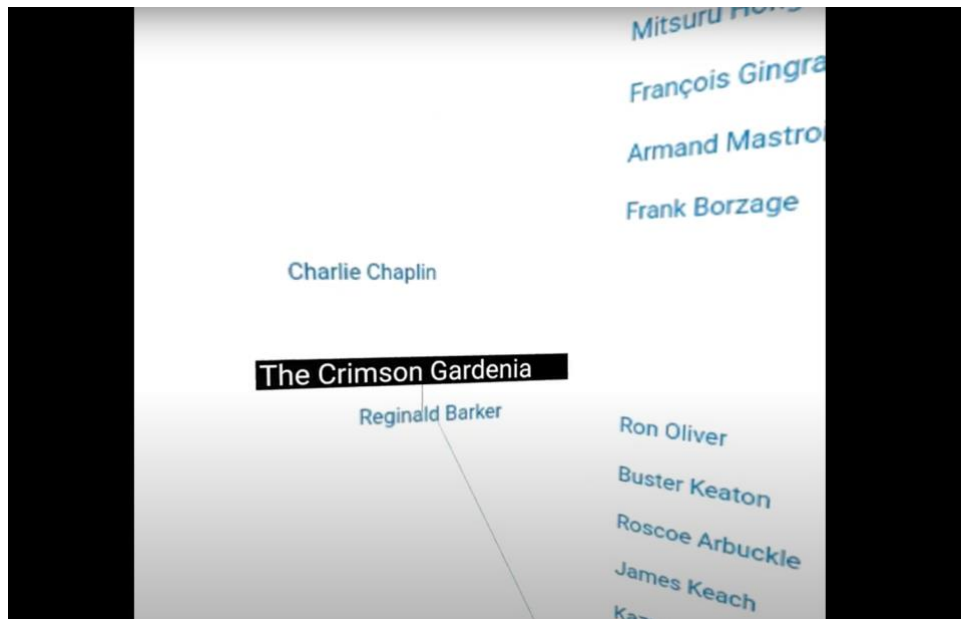
Portal

1) Hello world portal

- [Use camera layers to implement portal effect (works for primitives and gltf models in this example)](#)

2) Gltf model portal with control

- [Press c, the portal will move with mouse](#)

Teleportation

1) In mobile

- [Click on the screen to teleport to the position of the center small dot](#)