

# Procedural Poetry Funhouse

Summer 2024

## BACKGROUND

In the 1960s and 70s, Vancouver was home to many visual poets that used poetry in unconventional, playful, and creative ways. Inspired by this scene, this project aims to explore the concept of visual poetry in a VR space, creating a unique and interactive learning experience for Creative Writing students.

## PROJECT DETAILS



*The Poetry Funhouse, Inspired by the Arbutus Grocery/Coffee in Kitsilano.*

In this VR Poetry Funhouse, players can let their writer's creativity run wild!

**Explore:** The Funhouse- and its surrounding neighborhood - are full of elements that pay homage to the project's inspirations and inject whimsy into the player experience. Explore this fully customized environment with immersive audio!

**Collect Words:** Reach for randomized words and ideas as you travel across the chaos of the procedurally-generated labyrinth!

**Write your Poem:** Arrange the words you've collected in a 3D virtual space. Play with word choice, form, and placement to create new meanings and experience poetry in a different way.

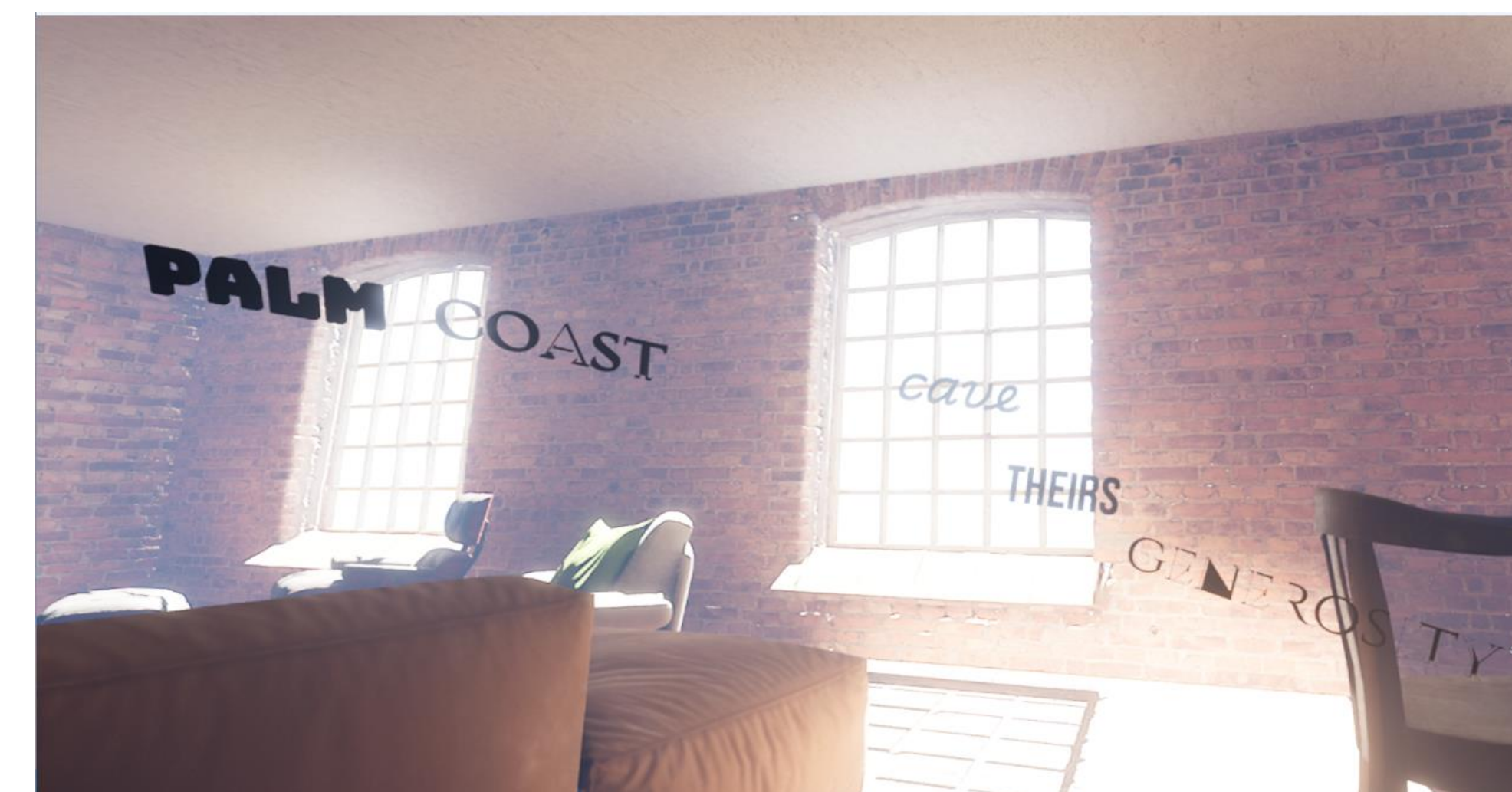
**Sentiment analysis:** With AI-powered sentiment analysis feedback, watch as your surroundings transform as you build it – the environment's mood shifts and changes according to your poem's themes.

## PROCESS

This project is developed with Unreal Engine. Additional design tools include Blender and Figma.

### Procedurally Generated Maze

The maze is generated by spawning individual pathway tiles in a room according to an algorithm, creating a pathway between the start and endpoint. The chaotic look of the maze walls is determined by the randomized retrieval and spawning of 3D assets in the wall tiles.



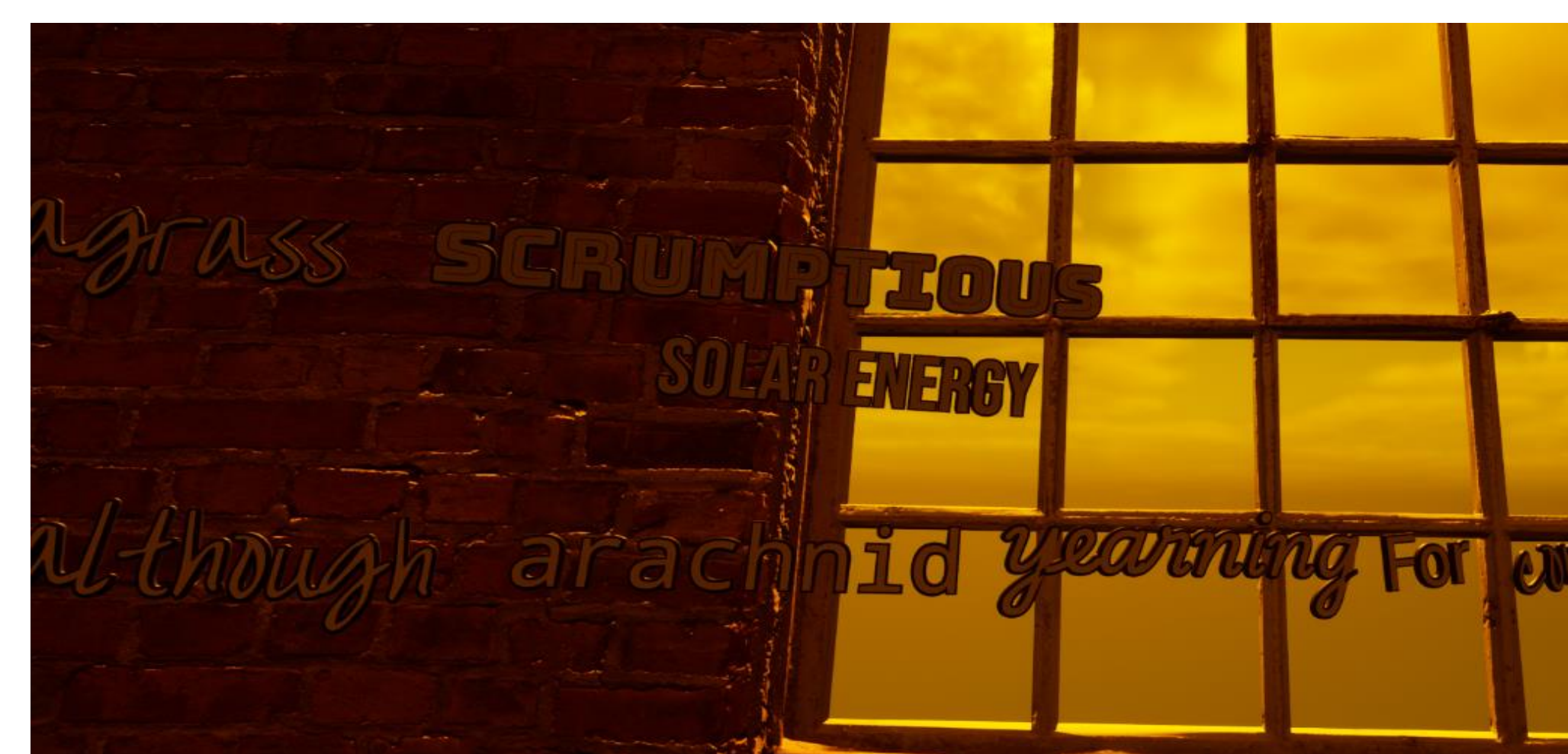
*The Poetry Funhouse, Inspired by the Arbutus Grocery/Coffee in Kitsilano.*

### Word Mechanics

- **Word spawner:** Spawns random Word Magnets in the Maze level
- **Word Collection:** Allows users to “collect” Word Magnets, adding them to their Word Bank
- **Word Bank:** This is a list of the words that the player has already collected. It includes an intuitive user interface component that users can retrieve words from.
- **Poem Creation:** Allows users to spawn Word Magnets in the virtual environment and move, delete, or add words as desired.

### Sentiment Analysis

This project uses the OpenAI API for poem sentiment analysis, which adjusts the color tint of the room based on the poem's mood. The poem is sent to language model via a WebSocket



connection. The language model analyzes the poem based on word choice and word proximity, suggesting a color based on the poem's sentiment. This color is then applied to as a visual tint.

## KEY FEATURES

- Custom 3D environment with custom audio, assets, and user interface
- User Tutorial
- Procedurally-generated maze path with randomized ambient assets
- Mechanisms for spawning words and building poems
- AI sentiment analysis to augment color tint in VR based on poem themes

## NEXT STEPS

- Usability testing
- Implementing additional activity rooms
- Addition of more interactive elements to the environment

## ACKNOWLEDGEMENT

### Principal Investigator:

Dr. Bronwen Tate  
Jennifer Moss  
A.E. Osworth  
Ray Clark

### Student Team

Mariane Olivan  
Jiho Kim  
Samia Sajid  
Ameya Goel  
Julien Roy  
James Delsther  
Edralin  
Walker Rout

### Made With Help From

**EML Staff**  
eml.ubc.ca

