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Independent Studies Proposal
CART, Winter 2025

Project Overview

Title: *(Tentatively) Crowd Poetry*

Objective:
The goal of this project is to develop a dynamic "crowd sampler" instrument that allows users to input a poem and have the device autonomously search for, download, and sample relevant material to create an evolving audio experience. The device will analyze the poem's content to guide the selection of sound clips, video segments, and text-based data from the internet. In addition to user-generated input, the sampler will integrate live data streams—such as social media posts (e.g., TikTok captions) or real-time news updates—which will dynamically influence the sound and narrative of the poem. The user will have the ability to interact with the device, altering the audio composition in real time, while networked users and data streams can further modify the process.

Purpose and Relevance

The project blends concepts from audio hardware, networking, and narrative and interaction design. *Crowd Poetry* will explore the intersection of creative coding, real-time media processing, and collaborative interaction, resulting in an immersive experience that evolves both from individual contributions and external data sources. Development of this hardware artefact builds on learnings in interactive design, UI, UX, game-like elements and my own experiences building audio hardware. Ideally, the device is self-contained pending processing power.

Value

The value of this project lies in its interdisciplinary nature. The blending of technologies in service of art is a CART strong suit and with this project I aim to achieve that. Additionally, the project provides an innovative approach to interactivity, blending tactile interaction with storytelling in a way that hasn't been fully explored in the context of music and text-based games.

The final project will be a working prototype of the instrument and its corresponding web interface, where the poem may be visualized and interacted with remotely.

Research Scope

The project will be broken down into the following phases:

- **Phase 1: Conceptualization and Design**
  Define the overall user experience, combining musical interaction with text-based progression. Design the architecture of the networked system and its interface.

- **Phase 2: Prototyping the Networked Instrument**
  Key considerations for the computation power required for the tech stack and how that affects the final product; a Raspberry Pi 5 may have just enough power to be able to be integrated into a keyboard-like device. Else, a mini-pc or tower may be necessary.

- **Phase 3: UI & Experience Design**
  Poem design (and artistic constraints on said poem), the web interface and other aesthetic considerations would inform this phase where the variable portions of this project can be decided.

- **Phase 4: Integration and Testing**
  Integrate the networked instrument, followed by user testing to fine-tune both the musical interaction and poetic elements.

- **Phase 5: Final Implementation**
  Present a polished version of the project with fully integrated elements, allowing multiple users to interact with the instrument while experiencing the evolving soundscape.

Methodology

- **Technologies Used**

  - **Audio Processing & Hardware:** Utilize microcontrollers and sensors(?) to capture user input and manipulate sound.
  - **Networking Protocols:** Implement a server-client model to allow real-time networked interaction, or compute all sound on-device.
  - **Web Stack:** Provided enough time, a web interface to visualize the instrument's state and modify it remotely.

- **User Interaction**
  Users will engage with the instrument through networked devices (such as a computer, tablet, or smartphone) and influence the musical output. Samples from the internet (or user submissions)? will be dynamically combined into a soundscape that may be integrated with other instruments.

- **Evaluation Criteria**
  Evaluate the project based on its ability to engage users in a meaningful way, blending music and text composition. Feedback will focus on usability, user experience, and the cohesiveness of the musical and textual elements.

6. Timeline & Schedule

- **Week 1-3:** Conceptualization and system design.
- **Week 4-6:** Prototyping the instrument and initial network testing.
- **Week 7-9:** Narrative design and integration with the networked instrument.
- **Week 10-12:** Final integration, testing, and user feedback.
- **Week 13-15:** Final adjustments and presentation.