Recognizing Computational Thinking in Non-Coding Games: Educator Tagging Tool

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Project Description

This project developed a lightweight, educator friendly, web-based tagging tool designed to help educators recognize computational thinking skills exhibited by students while playing non coding games such as Minecraft, Teamfight Tactics, and Super Smash Bros. Built using Python and Streamlit, the tool simplifies identifying and visualizing computational thinking skills, making computational thinking assessment accessible to educators without a programming background.

Contents

Code

- **ct_tagger.py**: Main Streamlit app code.
- **Host**: https://cttagger.streamlit.app/

Design Documents

- **Wireframes**: Interface wireframes designed in Figma showing initial user interaction plans.

Documentation

- **Computational Thinking Skill List (md file)**: Annotated list and definitions of computational thinking skills used.
- **Scenario Dataset (md file)**: A set of 22 annotated gameplay scenarios from Minecraft, TFT, and Super Smash Bros demonstrating tagged computational thinking skills.
- **Usability Testing Script PDF**: Structured script used during pilot usability tests.
- **Usability Feedback Summary PDF**: Compiled feedback and insights from pilot usability testing sessions.
- **Educator Guide (md file):** Guide designed for educators explaining how to use the tool effectively in classrooms.

- **requirements.txt**: Python dependencies needed for setup.
- **README.md**: Clear instructions on running the tool locally and/or deploying online. Could also be used as the educator guide.

Visualizations and Presentations

- **Final Report PDF**: Comprehensive academic paper summarizing the project's design, evaluation, findings, and next steps.
- **Video Presentatio**n: Video Demonstration of the application.