Sonus Texere

Automated Dense Soundtrack Construction for Books Using Movie Adaptations

Jaidev Shriram, Makarand Tapaswi, Vinoo Alluri
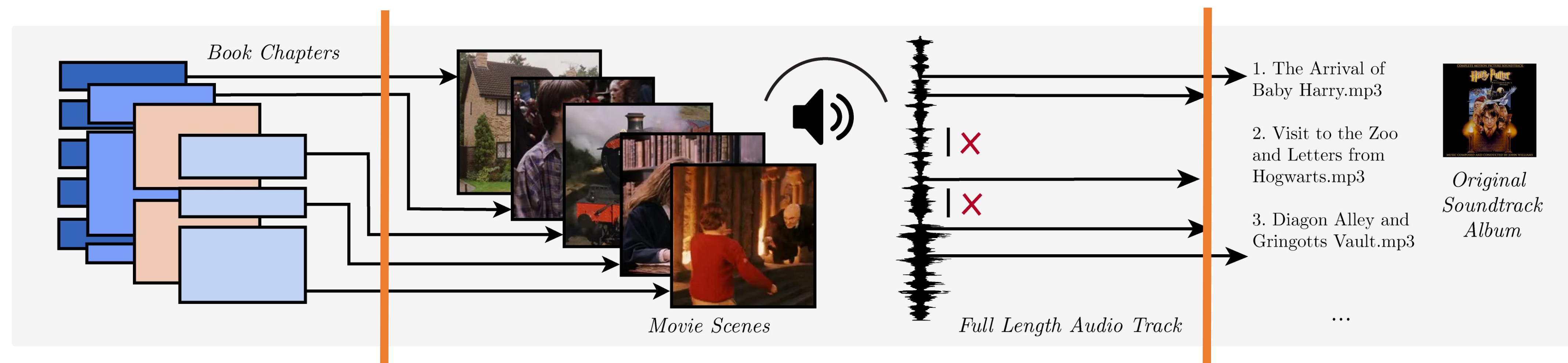
Idea: Generate a book soundtrack using the score from the movie adaptation.

Music has always been essential in accentuating movies but has yet to be used in books. In this work, we automatically build a soundtrack for books that complements narratives and emotional plot points, resulting in a highly immersive reading experience

Step 1: Split each modality into smaller homogenous segments, for easier processing.

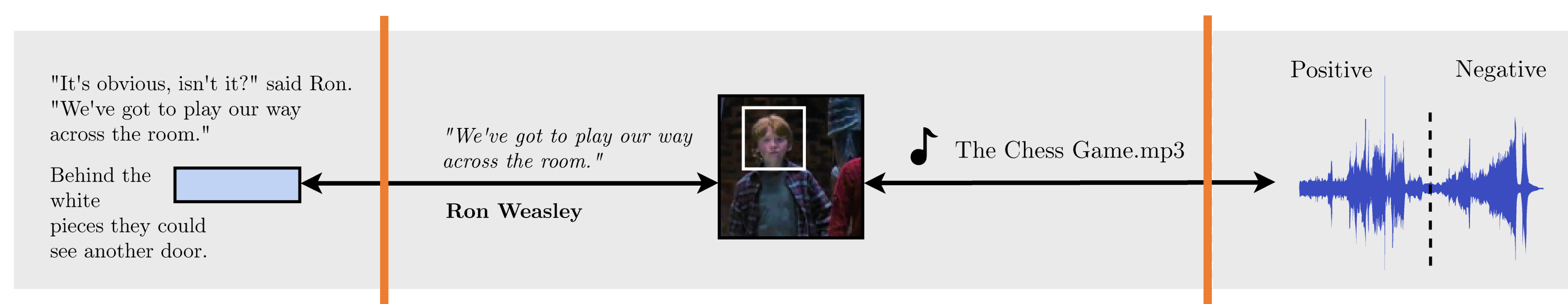Book   Movie   Music

We segment each modality to obtain narratively and emotionally cohesive chunks of text, video, and music. This ensures that we can compare the content of each chunk more easily.

User Feedback

"The music provided insight into the tone of the chapter and [...] beyond imagination, provided a soundtrack to what was read"

"It actually made the experience better as the transition put you in the mood for the expected emotion - from melancholy to sad"

"When the tension built in the plot, the music transitioned to match it."

Step 2: Match paragraph chunks with movie scenes & movie scenes with music tracks

Book Chapters

1. The Arrival of Baby Harry.mp3

2. Visit to the Zoo and Letters from Hogwarts.mp3

3. Diagon Alley and Gringotts Vault.mp3

Original Soundtrack Album

Movie Scenes   *Full Length Audio Track*   ...

Align the book and movie using dialogue similarity, character co-occurrences. Align the movie and soundtrack using Shazam. This gives us a paragraph-scene and scene-music mapping.

Prior work has largely focussed on short pieces of text or used retrieval on a mixed dataset. Our design decisions ensure dense soundtracking of an entire novel with great stylistic cohesion and even permits musical motifs in the book soundtrack.

Step 3: Using the movie scene as an intermediary, assign a track to every paragraph chunk

"It's obvious, isn't it?" said Ron. "We've got to play our way across the room."

Behind the white pieces they could see another door.

"We've got to play our way across the room."

Ron Weasley

♪ The Chess Game.mp3

Positive   Negative

For every text chunk, assign it a single emotionally relevant audio-segment. Taken together, the audio for all text-segments form the book soundtrack.

Check out the project page (and demo):

`auto-book-soundtrack.github.io`