

Project title: SplitsFromVideo

Team Members:

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Faculty Advisor: Eraldo Ribeiro (eribeiro@fit.edu)

Client: Speedrunning community (speedrun.com)

Task	Completion %	Mateusz	Carter	To Do
1. Compare and select Technical Tools	100%	50%	50%	none
2. "hello world" demos	100%	40%	60%	Demo of the PARTS algorithm using OCR
3. Resolve Technical Challenges	100%	50%	50%	Figure out how to reduce the time it takes to get each frame
4. User interface design	100%	50%	50%	none
5. Requirement Document	100%	30%	70%	none
6. Design Document	100%	70%	30%	none
7. Test Plan	100%	50%	50%	none

Discussion of tasks:

- Task 1: We compared tools and decided that the selected tools from the project plan should be sufficient.
- **Task 2:** A demo for the PARTS algorithm has been implemented without using Optical Character Recognition and instead using manual time entry.
- Task 3: We discussed some of the technical challenges and are confident we can overcome them.

- **Task 4:** We started implementing the shape and design of our user interface using Pywebview
- Task 5: The requirements document is completely finished and outlines the requirements of the program very well.
- Task 6: The design document is also finished and outlines the design well.
- Task 7: The testing document is also finished and outlines the testing well.

Discussion of contribution:

- Mateusz Doda: User interface design
- Carter Tabin: PARTS algorithm demo

Plan for the next milestone:

Task	Mateusz	Carter
Reduce the time it takes to retrieve frames in sequence.	Figure out how to manage frame advancing efficiently. It currently takes a few seconds to get each frame.	Figure out how to manage frame advancing efficiently. It currently takes a few seconds to get each frame.
Implement, test, and demo algorithm for finding the beginning of splits using Optical Character Recognition.	Work on more user interface design. Figure out how to do OCR and apply it to our use case.	Figure out how to do OCR and apply it to our use case.

Discussion (at least a paragraph) of each planned task for the next Milestone

- Task 1: Reduce the time it takes to retrieve frames in sequence.

Currently, to retrieve frames, cap-from-youtube queries youtube with a specific frame number and downloads the specified frame. This works, but each frame takes a few seconds to retrieve. It might be beneficial to get a video stream and get frames from that, but it is unclear if that would reduce the time it takes to get video frames. There also may be a better solution than this as well. We expect no more than 5 frames needed per split in the algorithm. With the current time it takes, that is not ideal but still feasible. There is likely a better way, such as predownloading frames that may be needed or something like that. Or downloading at a lower resolution.

- Task 2: Implement, test, and demo algorithm for finding the beginning of splits using Optical Character Recognition.

Currently, a basic version of the PARTS algorithm is implemented. In its current state, the user selects a frame that shows the timer stopped after the end of the run. Then, it pops up that frame in a new window and allows the user to enter the time that is present on the detailed timer. The algorithm then converts that time to frames and gets the next frame using that frame delta. This is then repeated until the user finds the beginning of the current split and clicks the record split button. These frames are saved to a list and the splits are calculated based on them. The next step is to implement Optical Character Recognition into the algorithm, rather than using manual user entry. The basis of the algorithm is the same, but OCR finds the time on screen instead of prompting the user for the time on the detailed timer. We need to figure out how to configure this and have it work for many types of LiveSplit layouts.

Date(s) of meeting(s) with Client during the current milestone: N/A

Client feedback on the current milestone: N/A

We chose not to meet with any clients during this milestone. The main “clients” we used for the project proposal were speedrunners from Discord. We chose not to contact these speedrunners for this milestone due to not having much more implemented than a rough demo of the algorithm. When we get to more nuanced or user-centric requirements, we may talk with the previous clients again.

Date(s) of meeting(s) with Faculty Advisor during the current milestone: N/A for current milestone. Discussion of project before class Intro to CV class.

- Task 1: ...
- Task 2: ...
- Task 3: ...
- Task 4: ...

Faculty Advisor Signature: _____ Date: _____