

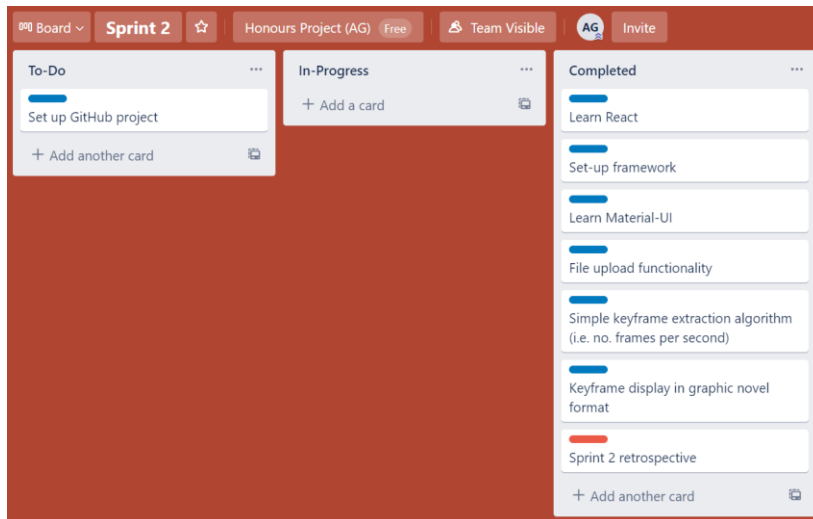
# Sprint 2 Retrospective

**Start Date:** 8<sup>th</sup> of February 2021

**End Date:** 14<sup>th</sup> of February 2021

**Duration:** 7 days

**Goals:** React and Material UI were selected in Sprint 1. Sprint 2 involved learning and experimenting with these frameworks to create a starting point for the system. Video processing techniques compatible with React were also explored in this sprint.



## Decisions:

### *FFmpeg*

FFmpeg is a free and open-source software project consisting of a large suite of libraries and programs for handling video, audio and other multimedia files and streams. It was chosen for this project due to its video conversion functionality and compatibility with react.

## Outcomes:

Video file upload, keyframe extraction

The beginning of this sprint was focused on learning the React framework along with Material UI. This was accomplished by first following a video tutorial to create a foundation and then by experimenting with the code.

File upload functionality was implemented in this sprint using FFmpeg and Web Assembly. FFmpeg is written in the C programming language, Web Assembly allows for FFmpeg to run in the browser which removes the need for a backend server by providing a JavaScript API.

The focus of this sprint was purely on the video file. Conversion of the uploaded video into keyframes was achieved using FFmpeg. FFmpeg has keyframe extraction functionality built-in so this involved reviewing the documentation and finding the correct commands for this feature. The keyframes are accurate and very similar to the manually selected keyframes used for the survey graphic novel. However, there is no way to specify the number of keyframes output so this will have to be altered in future sprints.