



CALIFORNIA SCIENCE & ENGINEERING FAIR 2018 PROJECT SUMMARY

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Project Title Meloread	
Objectives/Goals Abstract In the US, 32 million adults are illiterate and although new educational techniques are being developed, the literacy rate is not increasing by much. According to Time Magazine, kids read less and less as they get older, with "45% of 17-year-olds saying they only read twice a year". These percentages have tripled by 2014 which is also reflected by poorer scoring on reading comprehension tests as reported by research from Common Sense Media. Thus, the literacy rates in the US are stagnant, leaving a large group of people struggling in today's faster pace society. Evidently, those who fail to become literate have difficulty finding jobs, maintaining relationships and simply navigating the streets. How can we combat the declining literacy and better educate the people in the US? Make reading more entertaining. Nowadays, teenagers are drawn to watch the latest tv shows for hours due to the immersive experience complete with colorful graphics and dramatic music instead of settling down for a plain book or article. Thus, we created Meloread to provide students with an immersive reading experience by adding music that matches the tone of their reading material, motivating more students to read and ultimately increasing literacy rates.	
Methods/Materials 2 laptop computers with text editor as well as JavaScript testing suite. Was tested by submitting the app to the Chrome App Store and having 500 users download it and fill out a survey App is written in HTML, CSS, JavaScript and JQuery and connects to the IBM Watson API in order to use neural networks to determine the tone of the active text, then plays music from YouTube with the relevant mood	
Results Over 400 of the 500 users ages 13-19 surveyed reported that they would be happy to use Meloread again in the future as a reading aid in order to make the reading experience more enjoyable and interesting.	
Conclusions/Discussion In the future, Meloread could make use of iteration in order to improve upon itself and take into account user feedback, including consistent crashing of the Chrome extension as well as the inability to support background playback. In this sample it was determined that it is indeed more enjoyable to use Meloread	
Summary Statement Meloread is a computer software that matches music to the tone of one's reading material to provide an enhanced reading experience.	
Help Received We designed and programmed the app ourselves using internet searches on API usage and received suggestions from mentors at a hackathon.	