Thesis Project Portfolio

Automated Battleship

(Technical Report)

Older Adults Effect on the Development of Video Games

(STS Research Paper)

An Undergraduate Thesis

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Sociotechnical Synthesis

The spread of the coronavirus disease (COVID-19) lead to a global pandemic in 2020. Due to the pandemic, people were forced to socially isolate themselves and many older adults had no social support which increased feelings of loneliness. To combat this feeling of loneliness, I created a variation of the Battleship Game that is a one-player game instead of a two-player game so that it can be played by individuals that do not have anyone to play a game with. It has been proven that with an increase in age there is a decrease in cognitive function and there has been a significant increase in the number of individuals aged 50 years or older. In addition, the social isolation caused by the pandemic has increased the rate of cognitive decline. Using the social construction of technology theory, I analyzed the development of video games due to the increasing presence and needs of older adults. To analyze development of video games, I used a case study approach to research the design specifications of video games designed for older adults and the design process of video games designated for a younger audience. I have found that the design specifications for older adults involved aspects like the volume, font size, and reward systems while the design process for a younger audience mostly involved storytelling and presentation. My battleship game has created a way for older adults to feel less lonely and my research has shown how the prevailing needs of older adults in terms of their cognitive health has affected the development of video games.