

Part A:

1. Describing the problem

Over the past years Mary Ellen Henderson Middle School, despite having a very strong computer science and math curriculum, has not offered any educational opportunities teaching artificial intelligence (AI). This is simply because available AI is often deemed as a topic that is too complex to teach to middle school students. I met with computer science teacher, **Mr.Erick**, who illustrated his frustration on the problem. “There are limited available resources to teach young students the basics of artificial intelligence” he said. “I have tried in the past to use some of the online resources to teach neural networks, but they are too complex for my students to understand. I’m looking for a straightforward game that students can download on to their iOS devices that incorporates basic artificial intelligence concepts. Ideally, it would allow them to understand the fundamental concepts of artificial intelligence by incorporating it into the game. I believe that this would be the best way for students to learn about artificial intelligence since it would be simple, easily accessible, and fun to use.”

2. Rationale for the Proposed Solution

I decided to make an iOS game as this is the best solution for this specific problem as an efficient AI learning resource for middle schoolers would be fun to use, simple, and portable, in addition most Mary Ellen Henderson students have iPhones. I will use Xcode to make this application since it is the best IDE for making iPhone apps and allow me to make the best possible application for this problem. This app will have a simple to use GUI and will feature big text in order to have maximum efficiency and ease of use.

3. Criteria for success

- Will allow students to play game
- Will have game menu, allowing students to play game with and without AI mode on
- Will explain the AI in simple terms, using the game
- Will have animations and music
- AI will use a neural network algorithm
- AI will copy the game play of the user
- Game will record high score of user