

We have the choice to model the AI after an optimal solution to hangman, where it will simply optimize for correct answers, or to model it after a human, where it "believes" it knows what the word is, and will keep guessing letters in the same word until the word it is believed to be is disproven, where it will pick a new word and keep guessing.

Optimal -

Here we can assume every word is equally likely, as an optimal guesser will have no patterns of more or less commonly used words.

1. Ask user for word length
2. Determine probability of each letter for each position in word
3. Sum probabilities for each letter across all positions in word
4. Guess most probable letter OR if confident enough, guess word
5. Receive feedback
6. Repeat steps 2-5 until word is guessed or man is hanged

Human -

1. Ask user for word length
2. Determine most common word or pick one at random
3. Guess the most common letter from the candidate word
4. Receive feedback
5. Word finished or man hanged -> game over
6. a) Letter correct -> repeat from 3
b) Letter incorrect -> repeat from 2