Project Mission Statement

Group 5: Muted

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We are thinking of developing a Morse code robot. Learning Morse code is a powerful communication tool that allows people to communicate with just two letters: $dot(\cdot)$ and dash (-). It is very easy to learn as it does not have any grammar rules. It is a flexible language that can be represented either acoustically or visually. Morse code is especially useful in situations where someone is in danger and cannot communicate orally. Thus, it is no surprise that the most famous Morse code sequence is $SOS(\cdot \cdot \cdot - - \cdot \cdot)$.

We would like to go one step further and help people to learn Morse code in an easy, fast and interactive way. Our final users will be the general public, from kids (+5 years old) to the elderly. The Morse code robot will consist of both light and sound sensors that will make the learning process more intuitive. Additional sensors or different components could be needed in the process but this is the preliminary plan we built for our robot. Users should expect the HRI interaction to follow the steps down below:

- 1. The robot indicates the letter with sound and light
- 2. The user touches the corresponding sensors
- 3. Robot receives input and checks if it is correct:
 - a. Valid letter: robot will activate a long buzzer
 - b. Invalid letter: robot will activate a short buzzer twice

Therefore, our robot will be responsible for testing and notifying whether the user's input is correct. After some repetitions, we expect users to learn some Morse code sequences.