Group members:

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Artist statement

The work we created is a program named “Self-Learning Robots.” All of our group members are fascinated by artificial intelligence. Therefore we decided to make our own from the start. The idea shaped quickly, however, it is hard for art students to achieve, for instance, coding and programming. Hence, we chose a software Unity to relieve part of the burdens, and we also can take advantage of its modeling feature. From the start, we only created digital spiders to catch their randomly generated goals. When we deployed the program, we found it may distance viewers as they are not participating but just standing and watching. We want to push the idea of collaboration further. Therefore, we decided to let the viewers determinate their goals.

We used unity to train robots to catch their individual goal, and we used ML-Agents Toolkit provided by Unity; wrote some code to give reward to our robot to punish it when it fails. All the movement of the robot is original; it learns by itself rather than being taught. By using Unity, we build a ground separating into different squares, which can be triggered by robots. Once a robot steps on a square, a clip of music will be played, during the process of robots' movement, a piece of music might be generated randomly. We add a diamond on the ground that can be controlled by the users, which increases the experience of real-time reaction of the robots. It is really interesting to watch how they move when we control our object to move the cubes.

The modeling part of this work is rather simple because we do not want audience to get distracted. Therefore, we removed the background we planned originally, to place the plane in blank space. Another thing we want to achieve is the futuristic feeling. By using neon light effect, bright and colorful crystal controlled by audience, we aimed for a sense of cyberpunk. Every clip of music is a single instrumental bit, in order to form a seemingly-completed song when player plays it. Moreover, we planned to split the screen into two perspectives. One is top view for other views to see how spiders move, while another is the front view for players to move the crystal.

For this project, we want to show a harmonious combination of art and artificial intelligence through music. With the rapid development of technology, AI may largely change our lives in the future. We want the viewers to experience the power of AI meanwhile participate in it as means of creating.