

We Robot Exhibition by Ian Jehle

Teaching art to robots.

Project Technique:

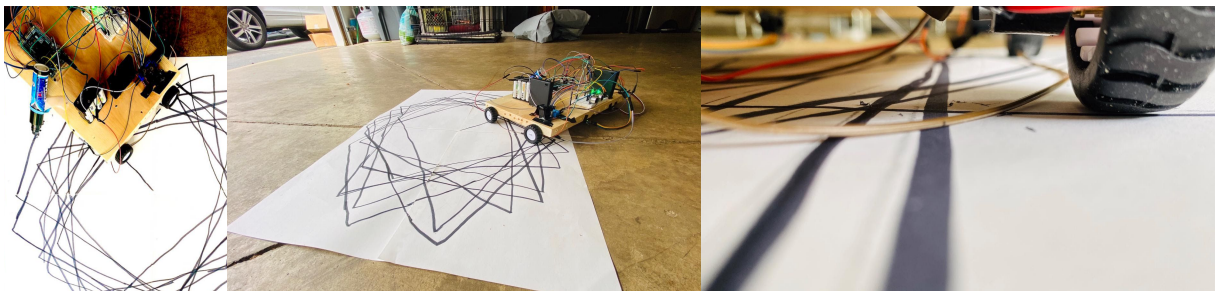
We Robot concerns a group of autonomous robots creating art on the floor of an exhibition space. Working with a collective of young robotics students, aged 12 to 14, all members of the international Vex robotics teams, we will design a series of algorithms the robots will use to create their drawings. The 20 robots will have 3 basic abilities: 1. the ability to move autonomously 2. the ability to sense the position walls and one another, 3. the ability to draw a line. The goal of these programs is to teach the robots basic art making skills such as 1-and-2-point perspective and geometric pattern making. The students will share their results and computer code online with other global Vex teams, who can comment and suggest edits to the robots' programming.

Exhibition:

A swarm of autonomous robots will create drawings on large rolls of paper or similar material mounted to the floor using code created by the collaborative work of robotics teams worldwide. A team of students from a Berlin-based robotics club will maintain the robots and post both the computer code and the results from each round of drawing. Visitors to the exhibition, whether in person or online, can watch the robots drawing as they move through the exhibition space. Once the robots complete their given programming, the floor covering will be removed and mounted on the walls as new paper is installed on the floor. With each new round, the students, in consultation with robotics teams throughout the world, will modify the code and set the robots working on a new drawing.

Artistic Approach:

The project relates to how knowledge is acquired and shared by the participants, both human and digital. *We Robot* is a reversal of the standard notion of how humans and robots learn. In this case, students collectively work on solving a problem using nothing but algorithms. Their processing power is extracted from minds all over the world sharing their results through online platforms and using a programming language as the common tongue. Then, like toddlers in Kindergarten, the robots will learn by doing, by getting their hands - or rather their wheels - dirty and by making art. Robots and human beings are already training one another. The methodology of the forum's teams mimic a layered neural network. And because the teams compete, they have a shared goal: transforming the competition into a type of distributed artificial intelligence. The project simply makes explicit changes that are already happening in the way we think, learn and communicate.



Photos from first test of drawing robot, performed by students from Vex Robotics Club, Manassas, VA.