

Case Study Title:

Arduino Touch Tic-Tac-Toe Game

Problem Background

The STEM lessons are usually hard. The students need to spend much more time on studying, labs and homework. Students are often discouraged by STEM subjects because they find them not interesting.

STEM Topics Involved



Physics



Maths



Biology



Chemistry



Technology



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Pedagogic Methods Suggested



Lecture



Story Telling



Problem Based Learning



Peer Instruction



Inquiry Based Learning



Simulation



Project Based Learning



Role Playing



Direct Instruction



Debate



Collaborative Based Learning



Flipped Classroom Approach



Game Based Learning

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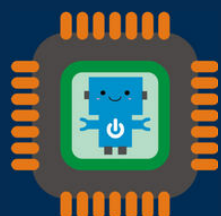
RoboSTEM

Project No. 2019-1-RO01-KA202-063965

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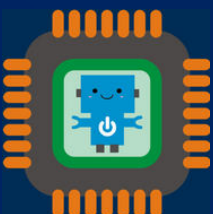


Solution

The idea behind this study case is to make the lesson more fun. Students will create an AI game oponent. The project is simple and it will be a great introduction to game programming and artificial intelligence.

Equipment & Materials Required

Arduino UNO & Genuino UNO
2.8" Touch screen



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Assembly Instructions

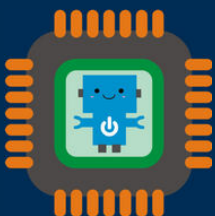
Step 1: Get All the Parts

Step 2: Building the Project and Testing It

Step 3: The Game Algorithm

Step 4: Code of the Project

Step 5: Final Thoughts and Improvements



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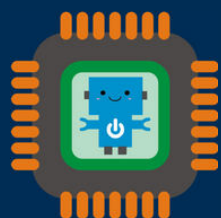
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