

Proposal: The Puzzler

The robot will solve all the sudoku, crossword and wordsearch puzzles. It will scan in a puzzle, recognize the type of input - puzzle type - and solve. Then it will physically fill in the blanks on the paper.

Software Components:

- Google Tensorflow
- Arduino IDE
- Open CV - read input
- C

Prototype Plan: We will develop the project using evolutionary prototypes. The first prototypes will only have the software components for solving the puzzles with digital inputs and outputs. The next phase would be to acquire the input by scanning the puzzle in with computer vision. The last phase would be adding on the drawing component where the robot fills in the puzzle answers with a pen. Each phase would be a working prototype and the next phase would build upon it by adding another component.

Hardware:

- Arduino Uno
- ArduCAM Mini Camera Module Shield
- XY plotter

Anticipated Problems:

- Constructing the chassis that allows accurate horizontal and vertical movement
- Transferring the camera's input into an array of numbers