Autonomous Foosball Bot

Project designed by:

1. Arkya Chatterjee (arkya.chat@gmail.com, 9433001363)
2. Raunaque Patra (rpatra1997@gmail.com, 8335873103)
3. Srijit Dutta (srijitdutta04@gmail.com, 9987582312)
4. Arunavo Mondal (arunavomondal97@gmail.com, 8828494843)

Overview and Motivation

An autonomous foosball bot provides a challenging and entertaining scenario of “man v/s machine” in a game of foosball. It provides an opportunity to the relatively experienced player to play against a formidable opponent without having to search for a human challenger. At present, there are no such machines available in mass production. So our team would like to develop a working prototype of such a device.

Goals

1. To develop a working prototype for an arcade style foosball bot
2. To understand the basic concepts of machine learning
3. To create the AI for the robot

Basic Components

- Foosball Table
- Array of laser and sensor
- Servo motors
- Linear actuators
- Arduino
- Raspberry Pi
- Wire
- Nuts and bolts

Milestones

I. Form a working mechanical structure (Week 1)

II. Implement AI for the basic functionality (Weeks 2 and 3)

III. Use machine learning to develop coordination between the different “players” (Weeks 4 and 5)

P.S.: Week 6 is going to be a buffer week, for debugging purposes, and for finalising the working prototype