

| Design Requirement Form | | |
|---|--|-------------------|
| Date: | 12/6/2017 | |
| Design Project Title: | Board Game Playing Robot | |
| Team Name: | Team Terminator | |
| Team Advisor | Chidi Ekeocha | |
| Team Assistant | Cory Bethrant | |
| Project's Long Term Goal | Chess Playing Robot | |
| Project's 2017-2018 Academic Year Goal | Tic-Tac-Toe Playing Robot | |
| Team Members (Design Class) | Cory Bethrant & Maxime Keita | |
| Team Members (Others) | William Johnson, Christopher Leader, Oluwaakanyinsola Adebayo, Tamaraupreye Benni, Sudarshan Prajapti, Eric Bond, Milan Albakri-Micou, Tekevwe Akoroda | |
| Requirements | Descriptions | Source |
| Background (NEED) | Needs to Demonstrate all the major capabilities of a real-life robot as a proof-of-concept. | Team Terminator |
| Objective (Problem) | AI must defeat human opponent without intervention. | Team Terminator |
| Performance | AI Should Win AI is Required to be Know When Opponents Turn is Over AI is Required to Keep Track of Game State Robot is Required to Move Pieces Independently | Team Terminator |
| Cost | <\$100 | Adafruit/Best Buy |
| Safety | Parts are standardized FFC Approved Electronics Devices. No Electrical Internals Are Exposed. | Adafruit/Best Buy |
| Compliance | All Components Follow FFC Regulations Related To Electrical Components and Moving Parts. | Adafruit/Best Buy |
| Energy, Power, and Environment | 4xD Batteries Required (not included) for Arm USB for Camera | Adafruit/Best Buy |
| Intellectual Property | OpenSource | OpenCV/TensorFlow |
| Size and Weight | 6.3 x 15 x 9 inches | Adafruit/Best Buy |
| Deliverables | Tic-Tac-Toe Brute Force Algorithm | Team Terminator |
| Others | | |
| Others | | |