

## Engineering Requirements from Given Customer Requirements

- The robot must be able to move autonomously with no human interaction once a pattern has been specified in the user interface.
- All provided components must be incorporated into the final system in the appropriate locations.
- Total cost for all components of the robot, excluding the laptop used to interface with the robot, which is assumed to be already owned by the user, costs less than \$100
- Power is supplied, via an AC to DC converter, from standard 120V AC found in households in the US.
- The system should be able to perform the same operation several times in a row.
- The system should still operate correctly after multiple operations
- No hazards exist that are frequent, probable, occasional, or remote with a severity rating of critical or catastrophic, as per the analysis performed in the previous section of this project.
- No hearing protection is required to maintain safe noise levels during operation.
- No rotational or shock hazards are present to the casual user.
- Rotation speed at least 4 rads/s
- Simple input format for the user
- A user with no prior knowledge of the system can operate it.
- All components are readily available from online sources and are not custom-built or special-order devices.
- Able to complete tasks with no human interaction