1 Non-Functional Requirements

1.1 Look & Feel Requirements

Requirement #: 1 **Requirement Type**: Look and Feel

Description: Players must be able to see the table setup upon their turn.
Rationale: The users must be able to make decisions about future shots.
Fit Criterion: The fit Criterion for this will be somewhat subjective, but essentially the majority of users should conclude that the position of the robot doesn't inhibit their ability to see the game-state when necessary.

Originator: Maxwell Moore

Customer Satisfaction: 2 **Customer Dissatisfaction**: 4
Priority: High **Conflicts**: None
Supporting Material: None

History: Created 03-NOV-2016

1.2 Usability & Humanity Requirements

Requirement #: 2 **Requirement Type**:Usability

Description:The design of the robot shall not greatly inhibit a players ability to make a shot.
Rationale: The users must be able to play acceptably alongside the robot.
Fit Criterion: The fit Criterion for this will be somewhat subjective, but essentially the majority of users should conclude that the position of the robot doesn't inhibit their ability to make shots as well as they would be able to on a regular pool table.

Originator: Maxwell Moore

Customer Satisfaction: 1 **Customer Dissatisfaction**: 5
Priority: High **Conflicts**: None
Supporting Material: None

History: Created 03-NOV-2016

Requirement #: 3 **Requirement Type**:Humanity

Description:The player should be able to freely interrupt the robots turn, or relinquish their turn.
Rationale: The user can have the freedom to choose to see the robots next move, or stop them for their own, at their will.
Fit Criterion: The fit Criterion for this will be that the robot can be interrupted or freely started, 99**Originator**: Maxwell Moore

Customer Satisfaction: 1 **Customer Dissatisfaction**: 3
Priority: Medium **Conflicts**: Possibly with enforcing rules of game
Supporting Material: None

History: Created 03-NOV-2016

1.3 Performance Requirements

PR1:

Requirement #: 4 **Requirement Type**:Performance

Description:The System will take shots quickly.
Rationale: The user will not have to wait too long to play their turn.
Fit Criterion: The fit Criterion for this will be that the robot will decide on a shot to take, and make that shot in under 90 seconds, 90 percent of the time.

Originator: Maxwell Moore

Customer Satisfaction: 1 **Customer Dissatisfaction**: 4
Priority: Medium **Conflicts**: none
Supporting Material: None

History: Created 03-NOV-2016

Requirement #: 5 **Requirement Type**:Performance

Description:The System will take shots precisely.
Rationale: The user will feel challenged by the robot.
Fit Criterion: The fit Criterion for this will be that the robot will decide on a shot to take, and make that shot in under, 50 percent of the time, assuming there was a reasonable, straight shot available.

Originator: Maxwell Moore

Customer Satisfaction: 4 **Customer Dissatisfaction**: 3
Priority: Medium **Conflicts**: none
Supporting Material: None

History: Created 03-NOV-2016

1.4 Operational & Environmental Requirements

Requirement #: 6 **Requirement Type**:Environment

Description:The System will be in an environment in accordance to regular pool playing environments
Rationale: The robot will not have unnecessary difficulties in making precise shots.
Fit Criterion: The fit Criterion for this will be that the system is indoors, and at room temperature while running, and be given a few feet of room on all sides.

Originator: Maxwell Moore

Customer Satisfaction: 1 **Customer Dissatisfaction**: 4
Priority: Medium **Conflicts**: none
Supporting Material: None

History: Created 03-NOV-2016

Requirement #: 7 **Requirement Type**:Operational

Description:The system will be provided with an external source of power
Rationale: The robot will have power to function..
Fit Criterion: The fit Criterion for this will be that power is in no way a restriction to our system.

Originator: Maxwell Moore

Customer Satisfaction: 1 **Customer Dissatisfaction**: 5
Priority: High **Conflicts**: none
Supporting Material: None

History: Created 03-NOV-2016

1.5 Maintainability & Support Requirements

MS1:

Requirement #: 8 **Requirement Type**:Maintainability

Description:The system will be tested weekly for its base functionality
Rationale: To ensure wear and tear of the system hasn't rendered it useless.
Fit Criterion: The fit Criterion for this will be that a short weekly test of previously completed functionalities is performed.

Originator: Maxwell Moore

Customer Satisfaction: 1 **Customer Dissatisfaction**: 1
Priority: Low **Conflicts**: none
Supporting Material: None

History: Created 03-NOV-2016

1.6 Security Requirements

Requirement #: 9 **Requirement Type**:Security

Description:Even very advanced users will not be able to modify the power of a shot beyond a certain safe value
Rationale: The robot will not be able to be used as a weapon, or with mal-intent.
Fit Criterion: The fit Criterion for this will be that with extensive personal testing without directly modifying the code our safety conditions cannot be broken.

Originator: Maxwell Moore

Customer Satisfaction: 1 **Customer Dissatisfaction**: 5
Priority: High **Conflicts**: none
Supporting Material: None

History: Created 03-NOV-2016

1.7 Cultural & Political Requirements

Requirement #: 10 **Requirement Type**:Cultural

Description:There will be no direct references to any political or religious groups
Rationale: This will avoid accidentally offending certain demographics.
Fit Criterion: The fit Criterion for this will be that 99 percent of users say there is no noticeable political or cultural relevance.

Originator: Maxwell Moore

Customer Satisfaction: 1 **Customer Dissatisfaction**: 1
Priority: low **Conflicts**: none
Supporting Material: None

History: Created 03-NOV-2016

1.8 Legal Requirements

L1:

Requirement #: 11 **Requirement Type**:Legall

Description:There will be no copyright infringement, or usage of non-open source, or services that have not been properly paid for
Rationale: This will avoid academic dishonesty, and maintain the moral integrity of the group.
Fit Criterion: The fit Criterion for this will be that 99 percent of users say there is no noticeable political or cultural relevance.

Originator: Maxwell Moore

Customer Satisfaction: 1 **Customer Dissatisfaction**: 1
Priority: low **Conflicts**: none
Supporting Material: None

History: Created 03-NOV-2016