

**Project and Professionalism**

**(6CS020)**

**A1: Project Proposal**

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**Acknowledgements**

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# **Statement of Proposal**

## **Project Title**

The name of the proposed project is “Chessmate”.

* 1. **Project Statement**

Chessmate is a chess playing bot that engages in a chess match with the user on a physical chess board. It uses a robotic arm to move the chess pieces in the board and image processing techniques to detect movement of pieces on the board.

## **Academic Question**

* How will the bot get the best possible movement for the move produced by the user?
* How will the chess pieces be moved using the arm?
* What will be used to track the movement of chess pieces?

## **Aims and Objectives**

* + 1. **Aims**
* Research on similar systems and their features.
* Gather information on image processing techniques and object detection.
* Gain an understanding on how to create movements for a bot.
* Learn how to create/use chess engines or APIs.

* + 1. **Objectives**
* Develop a chess playing bot.
* Implement object detection to the bot.

## **Artefacts**

* **System to detect movements of chess pieces placed by the user on the board.**

This system is responsible for tracking the position of chess pieces on the board and detecting the moves of the user.

* **Chess Engine**

This system generates best possible moves based on the moves done by the opponent user.

* **Mechanism for movement of pieces in the board.**

This system takes in the recommendations made by the chess engine to physically move the chess pieces on the chess board.

* **Algorithm to find out the pathway of the movement.**

This system finds out the optimal pathway for the chess piece to move from one place to another.

1. **Project Proposal**
   1. **Introduction**