

## Chess-playing robot

### Thesis outline

A chess playing manipulator robot was developed in the course of a previous thesis project, enabling a manipulator robot to play chess against a human adversary. A remaining problem with this chess-playing robot is that it cannot automatically detect the move made by the human player. As such, the user must input its desired move on a keyboard. We want to get rid of this restriction by automatically detecting the move made by the human. This can be done by taking a snapshot of the playing board before and after the move and comparing both.



### Student Tasks

The student will receive the following:

- 1 chess playing robot + documentation + full control source code (C++)
- Source code to read images from a camera (C++)

With this information, the student is required to output the following:

- In the robot control code, integrate a methodology to detect the move made by the human player, by comparing a camera image before and after the move.

### Student Profile

- Knowledge of programming
- Sound interest in computer vision
- Sound interest in robot control