

UROP 2009

Title: Robot Arm Demonstration

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Keywords: programming language C++, Qt-framework, Katana robot arm, computer vision

Prerequisites: Programming in C/C++

Abstract: The aim of the project is to implement a demonstration for a computer vision based controlled robot arm. The computer vision system has to detect the position and orientation of colored wooden bricks (cylinders, squared blocks, cubes, gabled roofs). The control software has to rearrange the bricks and has to build up a volatile construction.

The whole setup is designed to allow restricted human machine interaction. A visitor of an exhibition can destroy the construction by shaking a platform on which the bricks should be piled up by the robot arm. This implies, that the control software can start up from almost each random configuration of the bricks, because the robot has to act autonomously for hours without a service interruption.



For more information, contact the advisors directly and/or check the following sources:

<http://www.neuronics.ch/>, <http://www.qtsoftware.com/>,