Can't Touch This User Manual

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1 Problem Definition

Controlling a computer or peripheral using touchless controls is possible, but what motions are natural, effortless and easy to use? Questions of this nature can be answered using the Can't Touch This platform.

1.1 Motivation

At the start of this minor, students were given a choice in the subject of the research. Mister Hani introduced us to a series of subjects, of which the LeapMotion project was the most interesting to us. The idea of the LeapMotion was to create or extend existing software to enable people to control a computer without touching any peripherals.

1.2 Background information

The events that lead up to this question came from the medical industry. When surgeons perform surgeries, they often have to look through medical files, for example, an X-ray scan. This is difficult, as the surgeons most likely has dirty hands, and can therefore not touch any peripheral. Instead of viewing the documents himself, the surgeon has assistants that help him instead.

The use of assistants is a solution to the problem, but this requires another human, and personnel in the medical world is scarce. We therefore want to replace these human assistants with a device that allows surgeons to control the computer without touch any peripherals.

The people that are most interested in the results are software engineers, surgeons and hospital managers.

2 Installation Guide

- Windows, OSX or Linux
- The Rust programming language
- The LeapMotion SDK
- The physical LeapMotion device itself

The *Can't Touch This* platform is written using the Rust programming language. This means that the operating system that it will run on must support the Rust language. Fortunately, Rust runs on all popular operating systems today. According to the Rust website the following platforms are supported:

- Windows (7+)
- OSX (10.7+, Lion+)
- Linux (2.6.18+)

Additonally, the *Can't Touch This* platform requires the LeapMotion SDK to provide all necessary data. Just like the Rust programming language, the LeapMotion SDK can be installed on all platforms.