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WYDZIAŁ ELEKTRONIKI

KIERUNEK: Informatyka (INF)
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PRACA DYPLOMOWA
MAGISTERSKA

Smartfon z systemem Android
jako wysokopoziomowy sterownik robota

Android smartphone
as a high-level controller of a robot

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4.1 Introduction

Modern smartphones has many sensors, and most of them can extend robot's functionality. Sensors differ between phones, and new (or more advanced) ones can be connected using possible connections (mostly USB and Bluetooth). Most popular ones are:

- touch screen,

- accelerometer,

- gyroscope,

- microphone(s),

- front and rear camera(s),

- position sensors:

  - GPS,
  - based on GSM and WiFi,

- magnetometer,

- light sensor,

- proximity sensor.

Some (mostly high-end, or specialized ones) have also sensors like electronic compass, humidity/temperature sensors, fingerprint scanner, or even thermal camera.

4.2 Face detection

Available implementations of face detection includes:

- FaceDetector API,

- Camera API,

- openCV for Android,

- openCV NDK.

4.2.1   FaceDetector API

4.2.2   Camera API

4.2.3   openCV for Android

4.2.4   openCV NDK

4.3   Summary

Chapter 5

Summary

Bibliography

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