

ABSTRACT

Bachelor thesis: 95 p., 27 fig., 25 tabl., 2 appendixes, 8 sources.

Object of research: tactile control gestures identification.

Objective: to find or improve a method which is best suitable for tactile control gestures identification while meeting certain requirements for recognition quality under conditions of mobile devices' limited computing capacity.

Scope of study: scientific models, program tactile control recognition algorithms, as well as software modules implementing mentioned algorithms.

This paper examines the main methods used to detect tactile control gestures. A review of each method is presented.

A mobile application that implements methods of recognition of tactile control gestures was created. The application was used to perform a comprehensive analysis of each of the above methods, describing their advantages and drawbacks with regard to their use limited resources the mobile device (phone, tablet, smart watches, etc.) in terms of recognition speed, accuracy and training time.

The system is implemented in Java programming language, using Android Studio environment. System was tested on a built in emulator, as well as on physical devices. Possible ways of improving the system was considered.

TACTILE GESTURES, CONTROL GESTURES, GESTURE RECOGNITION,
PATTERN RECOGNITION, GESTURE IDENTIFICATION.