

## **ABSTRACT**

This work is devoted to the development of software, namely a neural network module, for recognising faces, emotions and communicating with people, as well as for the further creation of a robotic system (service robot) based on the use of the Raspberry Pi board. This software is based on the Python programming language and the use of such libraries as OpenCV, DeepFace for video stream processing and emotion recognition, and the gTTS library for text-to-speech. Analysing the functionality of this software, it can be assumed that this module, with some improvements, can be used for more complex service robots that will greatly simplify people's lives in the future. The total number of pages is 64, the number of illustrations in the work is 10, together with posters - 15, and there is additionally a presentation.