

## **ABSTRACT**

The theme: «Virtual reality input system»

Diploma work: 77 p., 10 tabl., 19 fig., 2 app., 15 references.

**VIRTUAL REALITY, AUGMENTED REALITY, COMPUTER VISION,  
DIGITAL IMAGE PROCESSING, OBJECT DETECTION**

The object of the study is video data from users' graphical data input device, which shows users' gesture commands.

The purpose of the study is to create virtual (augmented) reality keyboard input system using single graphical data input device.

The study uses digital image processing, object detection and object tracking methods.

The results of the study is the creation of a system that allows you to enter the information into computer with hands gestures using the camcorder. In order to implement the keyboard input in conditions of limited access to hardware, an own method of user's manual input was proposed.

The relevance of the study is a widespread use of virtual and augmented reality in the fields of education, science, design and digital entertainment. Developing and implementing the system that allow input using only one video camera, makes the use of virtual reality technologies more accessible.