ABSTRACT

This work includes 146 sheets, 20 used literature sources, 40 pictures, 3 tables, 5 applications.

The aim of the degree project is to create application package to perform the primary processing of image format DICOM, obtained from magnetic resonance angiography (MRA) for onward transmission module automated 3D-modeling and further use by physicians in medical practice.

The project analyzed the existing methods of image processing - thresholding, sharpen filtration, deconvolution filtration, and allotment the contours of using Sobel operator, Laplacian methods hausiana, Previta and Kenny, fuzzy logic.

According to the results of graduate design software developed in the programming language MATLAB. Completed test developed system based on real images of magnetic resonance imaging.

The developed system can be used in hospitals, working with the images of magnetic resonance imaging. The main users of the system are doctors who will use the system in their medical practice.

List of keywords: Magnetic Resonance Imaging, Digital Imaging and Communications in Medicine (DICOM), image artifacts, image segmentation, fuzzy logic, spatial model.