

ABSTRACT

Along with the development of technology, the using of Ultra Sonografi(USG) to control women uterus condition is a common way. This is because using USG tool is very useful to know if uterus condition is good or not to pregnant, to know pregnancies healthy and fetus condition during the pregnancies, even can be used to know sex of the fetus. To know description of the USG result that has been done is needed a specialist of pregnancy.

In the real world, the providing data often has unbalanced distribution that a class has a dominant distribution then other. This condition called imbalance class. So this USG data, that “sehat” class has dominant distribution then “sehat bersyarat” and “tidak sehat” class. Because of that, a preprocessing data technique is needed in order to classifier can identify minor class that has more value better. Sampling approach can optimize classifier ability to classifying minor class can be a solution for this problem.

This Final Task make software to analyze USG result data that has been sampling, diagnose pregnancy / uterus healthy and try to give some advice that relevant with analysis result. USG result data will be processed using neural network with optimization using Evolutionary Strategy(ES) so a optimal model will be built to diagnose if pregnancy / uterus in a good condition or not and give some advice if needed. Parameters that can be used to determine pregnancy healthy are gestational age, Biparietal Diameter(BPD), Femur Length(FL), placental localization, Hydramnios and Oligohydramnios, and fetal malformation. This software may be useful to help specialist to analyze USG result faster.

Keyword : Ultra SonoGrafı(USG), diagnosa, imbalance class, sampling, classifier, Neural Network, Evaluationary Strategy (ES), pregnancy, uterus, placenta, Hydramnios, Oligohydramnios, fetus.