

# **An implementation of PCO classification based on ultrasound image using Convolutional Neural Network**

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Abstract. Polycystic ovary syndrome (PCOS) is a hormonal endocrine disorders that infect many women in their reproductive cycle. It is a concern in a married couple because it is related fertility rate of women. One of the criteria for diagnosing PCOS are polycystic ovaries (PCO) [1]. Polycystic ovaries can be seen from the number and diameter of each follicle on ultrasound image [6]. In previous studies [9, 10, 14, 15] there is existing PCOS classification done automatically by the system using several methods. However, its feature extraction of the ultrasound image is still done manually. In this papers we propose a solution where the feature extraction is also done automatically using Convolutional Neural Network. The result of the system is surprisingly good though with small dataset.