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## **RADIANTYOU: Personalized PCOS Prediction Partner**

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Abstract: The abstract outlines a study aimed at addressing the challenge of detecting polycystic ovary syndrome (PCOS) in women, particularly in Asia where a significant portion of cases go undetected. PCOS is a complex hormonal disorder affecting reproductive health, characterized by irregular menstrual cycles, excessive androgen levels, and the presence of multiple cysts on the ovaries. The researchers employed machine learning techniques to develop a predictive model for early detection of PCOS. This approach leverages data on various physiological markers such as prolactin levels, blood pressure, thyroid-stimulating hormone (TSH), and pregnancy status. These factors are known to be associated with PCOS and can potentially serve as indicators for its presence. The abstract highlights the effectiveness of Random Forest, a machine learning algorithm, in accurately predicting PCOS with minimal computational time. This implies that the model developed by the researchers can reliably identify individuals at risk of PCOS, allowing for early intervention and management.

**Keywords:** Bioinformatics, Data Analysis, Infertility, Random Forest, Machine Learning, Pregnancy Complications, Polycystic Ovary Syndrome, PCOS Prediction, Syndrome Classification.

