Cultivation of Digital Diagnosis from Medical Images: Radiomics

Medical imaging is absolutely necessary way to diagnose diseases. It has advanced in considerable ways since the invention of X-Ray Imaging by Conrad Rontgen. His first patient was his wife Anna Bertha. He imaged his wife's hand via X-Ray. They were not aware the danger of X-Ray. Today's radiologists can image patients in a more sophisticated and healthier way. They can use many state of the art methodologies like magnetic resonance imaging, computed tomography, positron emission tomography, ultrasound and more. Such modalities can help in diagnosis and prognosis. Diagnosis is the starting point in the medical procedure. It can be done by interpreting medical images by a professional. However, even for a single patient, thousands of scan images are produced. Interpreting many images might be fraustrating for radiologists. On the other hand, even same radiologist may diagnose in different results for same medical images. Mood of radiologist may affect diagnosis. To automotize and standardize the diagnosis, radiomics analysis is preferred. In this paper, meaning of radiomics and procedure for radiomics analysis are given.