Problem Statement :

- Parkinson's disease is a neurological disorder with more than 6 million people worldwide suffering from it. It is commonly diagnosed using clinical assessments and progression scale which usually depends on the medical practitioner's expertise , and accuracy varies greatly between various examiners which also takes a long time to accurately diagnose. This paper proposes to develop a computer aided diagnostic method to diagnose PD patients using MRI images of the brain ,thus reducing cross examiner variability and the time required to accurately differentiate between PD and Control subjects. The images that the MRI dataset provides contain multiple slides of the brain and different studies might use different thickness of the slides . the most influencing region of the brain in the detection of Parkinson's is the SN region , we localize the sn region to classify between pd and no pd ,to improve the accuracy of the localization we separate the images containing the SN region ,In this study we use a custom CNN for automatically differentiating SN in image and no sn in image.