**[CS-8395 Spring 2020]**

**Deep Learning in Medical Image Computing**

**\* Please print and bring it before each class**

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Paper Title: Less is More: Simultaneous View Classification and Landmark Detection for Abdominal Ultrasound Images

Please summarize the paper using your own words: (<100 words)

This paper presents a framework for simultaneously performing two tasks for ultrasounds: classifying the type of view and landmark detection. The authors note that in the past, separate neural networks have been trained to perform the two tasks. The authors present a framework where the two tasks share several convolutional layers because they hypothesize that much of the feature detection part can be shared between the two tasks. Moreover, the authors add an adversarial network for the landmark detection part in the form of a GAN to ensure better landmark prediction capabilities.

Question 1 for the paper: Why does the base landmark detection network use SGD but the adversarial and classification networks use Adam?

Question 2 for the paper: How well would this network perform on a different backbone other than ResNet, such as VGG or DenseNet?