**CSE 541 Computer Vision**

**Section 1**

**Group 8**

**Project Number 7: Identification of lower extremity injuries from jump-landings videos: A Deep Learning Approach**

**Weekly Report**

**Week 3**

**Introduction:**

Sports like basketball and football involves rapid high-intensity movements which require high stamina, fitness and flexibility. As a result, there are chances of getting lower extremity injuries due to incorrect posture as a result of altered neuromuscular control while playing. Therefore, for early identification of such movements can prevent serious injuries. Our aim is to develop a robust model which helps in identifying such movements.

**Progress Summary:**

We explored the dataset of countermovement jump videos of 17 NCAA Division I female basketball athletes from the frontal and the sagittal (lateral) plane. By performing literature survey, we identified that the maximum knee flexion angle among other such point and angles, determined the landing error score. Next, we further discussed about the nature of dataset, videos, which consists of frames of images and which frame of the image was crucial for us, like the initial contact frame for measuring the maximum knee flexion angle. Also, we initiated the discussion about our approach to deal with the problem.

**Next Steps:**

We plan on identifying methods for extracting the important frames in videos, developing a error scoring mechanism and further, develop a model on that.