**CSE 541 Computer Vision**

**Section 1**

**Group 8**

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

**Week 6**

**Weekly Report**

**Problem Statement**

Competitive sports demand rapid high-intensity movements requiring exceptional physical

fitness, stamina and flexibility. Prolonged high-intensity repetitive exercises and asymmetric

postures increase the risk of injuries in athletes. This increased risk is attributed to altered or

reduced neuromuscular control during sports movements, leading to changes in lower limb joint

mechanics, including motions and loads. Landing is one such frequent movement in a sport

i like basketball.

**Progress**

It becomes necessary to annotate images according to the error classes in order to train the model. Roboflow performs the task of annotating images according to errors in the image. Initially we made six classes in roboflow depicting the error classes. Six classes were lateral flexion right, lateral flexion left, lateral flexion normal, stance width broad, stance width narrow, stance width normal. The csv file consisting of several error classes for every image was made after determining the error through mediapipe pose. Then taking the reference of that file, various images were annotated. Two bounding boxes were made. One for lateral flexion angle covering the whole body and another for stance width ratio capturing the image between shoulders and ankle. Thus, 210 images were annotated having appropriate error class.