**Intro to Deep Learning Project Proposal**Fill out the following sections try to limit your full proposal to around 300 words.

**Name:** Misha Suresh

**Project Title:** Classifying Athletes by Sports **1. What problem will you be investigating? Why is it interesting to you?**

I will be using an image dataset of athletes from various sports and apply deep learning techniques to explore visual patterns like clothes, background, and shoes to identify: 1) the equipment used in the sport, 2) classifying sport by ball size (S, M, L), or 3) indoor/outdoor sport. \*\*I would love input on which option seems to be the strongest to pursue for this project.\*\* I am going to use a CNN because convolutional neural networks are well-suited for image classification tasks, allowing the model to automatically learn spatial hierarchies of features such as textures, shapes, and patterns that distinguish different sports based on one of the classifications above.

This is interesting to me because I wanted to do a project based on sports, and I this is an exciting project to explore as I am graduating soon and hopefully this can provide me with some more relevant experience prior to getting a job.

**2. What dataset will you use, and how will you get it?**

**I will be using an image dataset that I found off Kaggle. [**<https://www.kaggle.com/datasets/gpiosenka/sports-classification/data>**]**

**3. Have people worked on this problem or similar ones before, if so what are you trying to do that's different?**

**A similar problem has been solved before of identifying what sport the athlete plays, so I am going to answer a similar question inspired by that.**

**4. How will you evaluate whether your model works or not**

**I will evaluate whether my model works by using accuracy to measure the overall classification success, and** precision, recall, and F1-score to account for class imbalances.