**SPROJ\_EECE\_7398\_MXX\_V03\_Milestone\_3**

Welcome back. In our previous lesson, we set up our development environment for the FiDIP project. Now that we have our environment ready, let's download the pre-trained models and prepare the data we'll need for training and testing. We need to download the pre-trained models as specified in the README. These models served as our starting point for transfer learning.

We need to download the pre-trained models as specified in the README file. These models were served as our starting point for transfer learning. Let's download the models from the Google Drive. Now we need to download and set up the SyRIP data set, which contains both real and synthetic infant poses. Let's check the structure and make sure it matches what's expected. As you can see here, we have the training data set for the infants and the pre-training data set, and the validation set. For the annotations, We can find the JSONs as depicted in the README file. So now everything looks good to go.

Let's go through understanding data in small data projects. In small data projects like FiDIP, understanding your data set is crucial. Let's discuss some key considerations. Data quality versus quantity. When data is limited, quality becomes even more important. Examine your data carefully for potential issues. Class imbalance. Some data sets often suffer from class imbalances. Be aware of this when interpreting results. Data augmentation potential. Consider what augmentations make sense for your domain in pose estimation, rotations, flips. Slide deformation often work well.

Domain gaps. If you're using transfer learning or domain adaptation, as in FiDIP, understand the differences between your source and target domains. Synthetic data consideration. When using synthetic data like in this project, be aware of to real as in simulated to real gap. Synthetic data may not capture the nuances of real data. A unique aspect of FiDIP is how it combines synthetic infant data with real data, and uses domain adaptation to bridge the gap. This is powerful approach when working with limited data.

Perfect. We've now downloaded the pre-trained models and prepared our data set. In the next lesson, we'll test the pre-trained models to ensure everything is set up correctly, and then we'll start the training process. See you there.