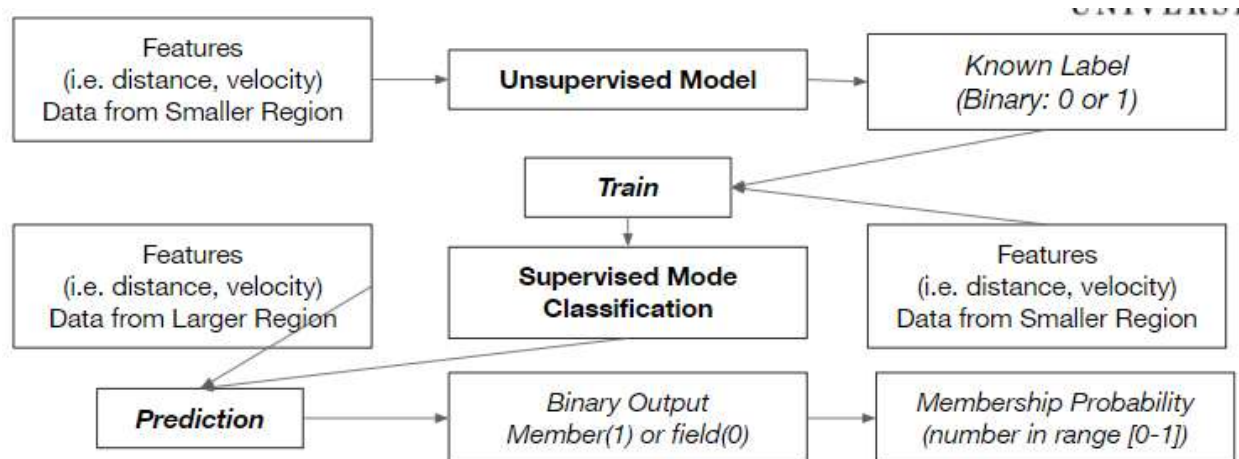


## Executive Summary

When a group of stars born together from a same cloud of gases, it is called a star cluster.

Analysis and research on star cluster helps us understand the formation of stars and how they evolve over time. But we need to first know which stars are the member of a cluster before analyzing them. Most of the available methods for member determination used a unsupervised approach, where we divide the stars in two or more separate groups based on their properties. The supervised methods are usually better in terms of efficiency and validation, but we need a labelled training data for that. As shown in the flowchart, I am proposing to use unsupervised method to generate a training dataset. Then we can use that dataset to train a better supervised model, which will allow us to detect more reliable members.



*The flowchart of my project showing how I am planning to combine both unsupervised and supervised methods in a semi-supervised approach.*