As a graduate student working with satellite remote sensing there are many areas that interests me for the use of AI. One such task is downscaling satellite products to finer spatial resolution. For an example GRACE satellite mission provides groundwater data that are captured and processed by GRACE mission. These groundwater products have a spatial resolution of around 50 square kilometers. This spatial resolution is not good enough to capture local groundwater changes which needs a much smaller resolution. Therefore AI technology can be used to downscale these coarse resolution data. In addition to GRACE groundwater products, I would use precipitation, evapotranspiration, and groundwater level data from wells as input data for this project. I believe Artificial Neural Networks, Random forest method are two appropriate methods that will help me downscale the GRACE product. Measuring success will be a difficult task as there aren’t many groundwater products to compare downscaled data. However, we can use statistical matrices such as, standard deviation and Root Mean Square Error for calculating accuracy and assessing success.