For several years, astronomers have been using sky surveys as a way to mass-collect data on sections of the sky to dissect them later and speed up the scientific process. Different sky surveys require different filter systems to detect what that specific survey is looking for. Because of this, the astronomical scientific community has collected a surplus of data on a multitude of stars, but in different filter systems. We explore the filter data extracted from the standard stars in the Sloan Digital Sky Survey (SDSS) and transform them to compare the filter set used with the Dark Energy Survey (DES). During both the Sloan Digital Sky Survey and the Dark Energy Survey, Stripe-82 along the equator was imaged for data collection. We cross-examine the SDSS and DES data sets to search for stars that exist in both systems on Stripe-82 based on right ascension and declination. We take those matches into a Python coding program that will transform them from one photometric system to the other. The synthetic data is then used as a comparison with the already existing set of data, and the uncertainties and equations are determined. For the duration of this project, I became more familiar with Jupyter Notebooks and Python code, as well as learned how to better read and process scientific data. I analyzed the graphs that the transformation code produced in order to determine the results and uncertainty. This project successfully produced the transformation coefficients required to transform SDSS data into DES data within the uncertainty margin. With the base of this outcome, it is expected that we will also find the transformation coefficients that will transform DES data into SDSS data. The results of this project will aid in the photometric calibration of the Rubin Large Synoptic Survey Telescope (LSST).