

Astronomy: an investigation into stars

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Research Summary

This project seeks to understand the part of universe our human perceived and gives the insight of how the brightness of stars in relate to the star type.

Research Question 1:

Which part of the universe are we looking at?

- Plot scatter graphs to show how the milky way looks from different axis (x,y,z) with respect to the arms.
- Create a class that takes the user location and time to calculate the perceivable stars of the given user and return the graph with all perceivable stars plotted

Research Question 2:

Is it sufficient to predict the spectrum type of stars based on their brightness and color?

- Filter the dataset to columns of star type, brightness, and color
- Subdivide the dataset into the train set and test subset
- Create a DecisionTreeClassifier to fit dataset and test out the accuracy

Data

HYG Database: Contains the background information of stellar data from a variety of catalogs: star names, positions, brightnesses, distances, and spectrum information.

Source: Data Collected from [The Astronomy Nexus](#) represents a subset of the data in three major catalogs: the Hipparcos Catalog, the Yale Bright Star Catalog (5th Edition), and the Gliese Catalog of Nearby Stars (3rd Edition).