Capstone Two: Project Ideas & Proposal

# Exoplanet Candidate Identification

With [data provided by NASA](https://www.kaggle.com/datasets/nasa/kepler-exoplanet-search-results), we can create a machine-learning program that will be able to extrapolate a legitimate candidate based on previous findings. This will allow for faster and potentially more accurate candidate determination and classification.

Some Helpful Links:

[What is an Exoplanet?](https://exoplanets.nasa.gov/what-is-an-exoplanet/overview/)

[Kaggle: Kepler Exoplanet Search Results](https://www.kaggle.com/datasets/nasa/kepler-exoplanet-search-results)

[Exoplanetary Data Links (CalTech)](https://exoplanetarchive.ipac.caltech.edu/docs/data.html)

[Exoplanetary Archive Raw Data](https://exoplanetarchive.ipac.caltech.edu/cgi-bin/TblView/nph-tblView?app=ExoTbls&config=koi)

# Tabby’s Star

Using astronomical data for KIC 8462852 in coordination with comparative data for similar categories of stars, we can extrapolate a theory of why or how this dimming of this star seems to be “unpredictable” and perhaps test this theory through a comparative study of further observations and a machine-learning model of Tabby’s Star.

Some Helpful Links:

[Time Series of the Flux of Tabby's Star](https://exoplanetarchive.ipac.caltech.edu/cgi-bin/ICETimeSeriesViewer/nph-ICEtimeseriesviewer?inventory_mode=id_single&idtype=source&id=8462852&dataset=Kepler)

[Tabitha Boyajian TED Talk](https://www.ted.com/speakers/tabetha_boyajian)

# Educational Assessment Demographic Data

This will be an exploratory analysis of testing data compared to the demographics of the socioeconomic locales in which the data was taken. This should be able to pinpoint which features can be attributed to successful or unsuccessful testing.

Some Helpful Links:

[National Center for Education Statistics](https://nces.ed.gov/nationsreportcard/data/)

[Education Demographic and Geographic Estimates](https://nces.ed.gov/programs/EDGE)