Exoplanet Prediction

# **David Kinney Spring 2021** [dkinneyBU/DSC680 (github.com)](https://github.com/dkinneyBU/DSC680)

# Domain

The NASA Exoplanet Archive is an online astronomical exoplanet and stellar catalog and data service that collates and cross-correlates astronomical data and information on exoplanets and their host stars, and provides tools to work with these data. The archive is dedicated to collecting and serving important public data sets involved in the search for and characterization of extrasolar planets and their host stars. These data include stellar parameters (such as positions, magnitudes, and temperatures), exoplanet parameters (such as masses and orbital parameters) and discovery/characterization data (such as published radial velocity curves, photometric light curves, images, and spectra). [1]

References

[1] NASA Exoplanet Archive – NASA Exoplanet Science Institute

<https://exoplanetarchive.ipac.caltech.edu/index.html>

Planet Hunters TESS

[Planet Hunters TESS | Zooniverse - People-powered research](https://www.zooniverse.org/projects/nora-dot-eisner/planet-hunters-tess)

[Asteroid Database and Mining Rankings - Asterank](http://www.asterank.com/)

# Data

The dataset I am leveraging is the Kepler Object of Interest table, located on the NASA Exoplanet Archive noted above. The Data Columns documentation can be reviewed here: [Data columns in Kepler Objects of Interest Table (caltech.edu)](https://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html). The dataset can be found here: [Kepler Objects of Interest (caltech.edu)](https://exoplanetarchive.ipac.caltech.edu/cgi-bin/TblView/nph-tblView?app=ExoTbls&config=cumulative).

# Research Questions? Benefits? Why analyze these data?

How are you proposing to analyze this dataset? This is about your approach. Here, you’ll be proposing your research questions as well as justifications for why you’d offer these data in this way.

# What Method?

What methods will you be using? What will those methods provide in terms of analysis? How is this useful?

# Potential Issues?

What challenges do you anticipate having? What could cause this project to go off schedule?

# Concluding Remarks

Tie it all together. Think of this section as your final report’s abstract.