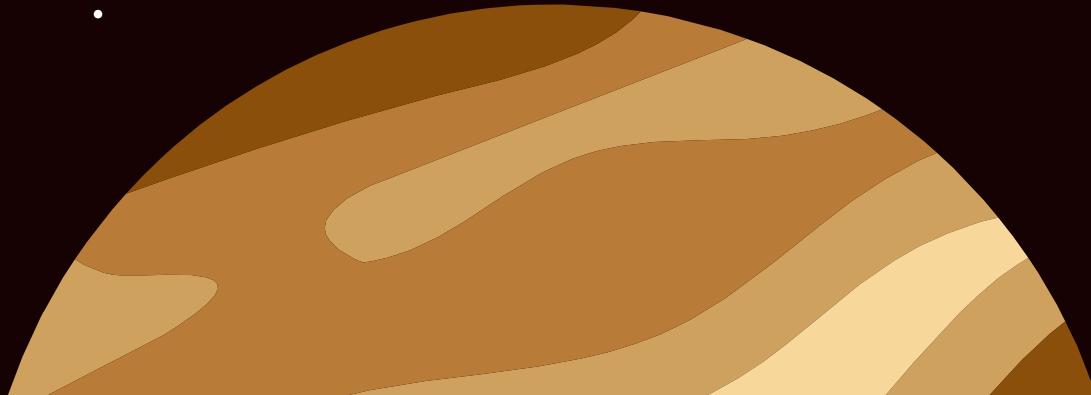


A PLACE AMONG THE STARS

Model predictions of stellar bodies



“The Universe is all that is, or ever was, or ever will be. Our contemplations of the cosmos stir us.”

—Carl Sagan



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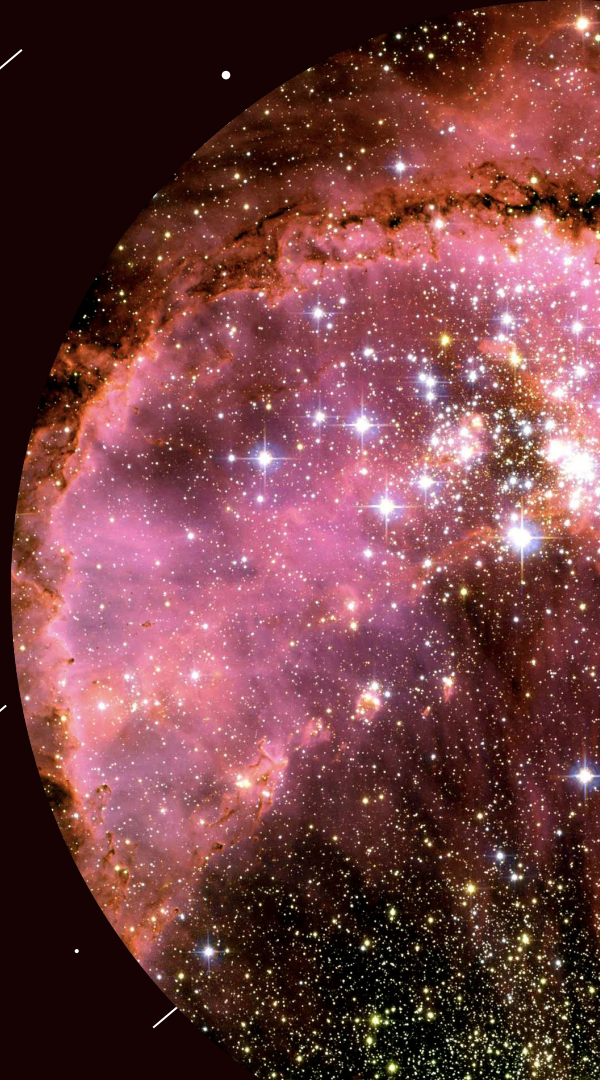
Hyperparameters we choose to get the best results

06 Results

Our findings from our model

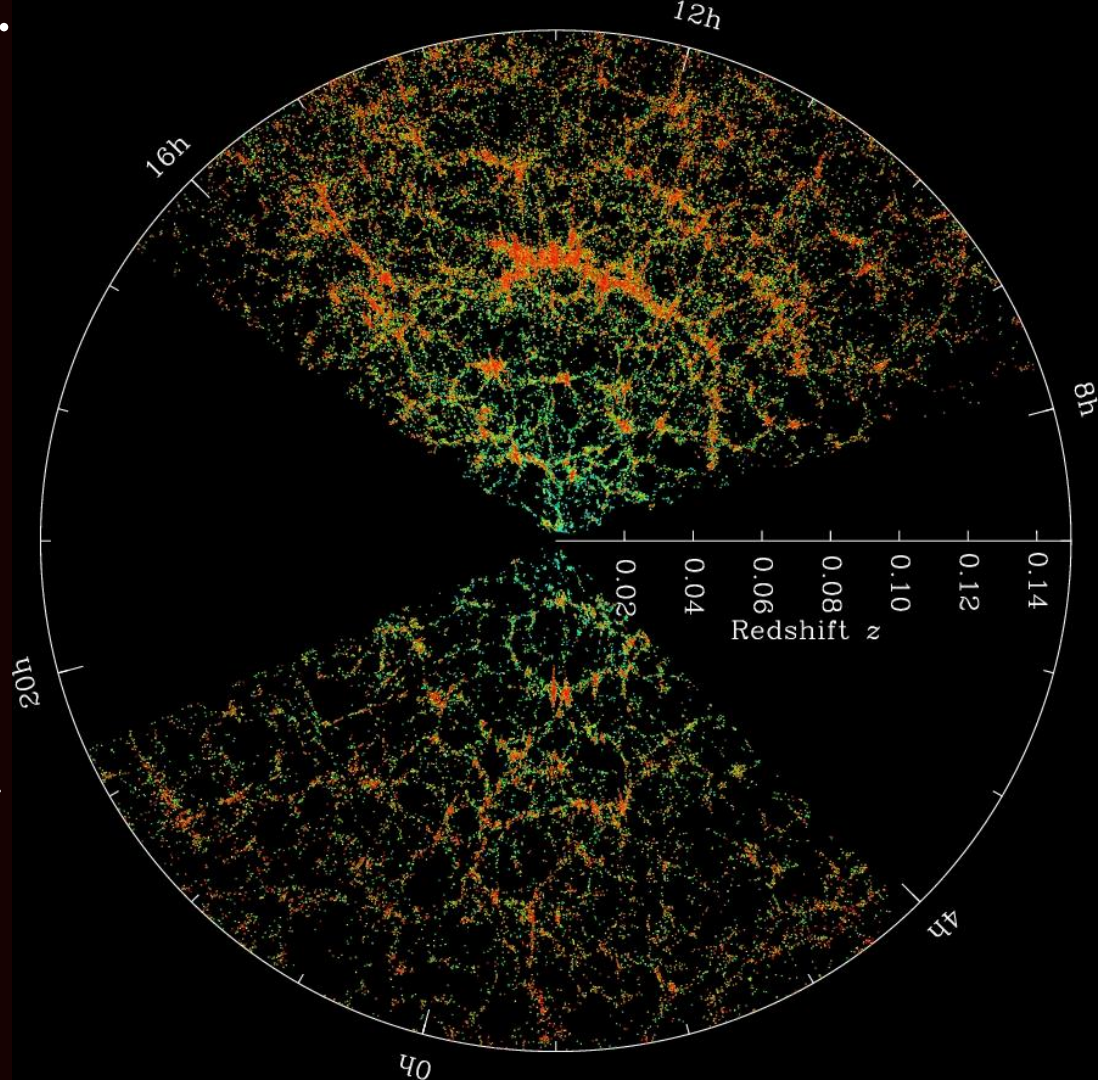
07 Where do we go from here

Using our results for further research



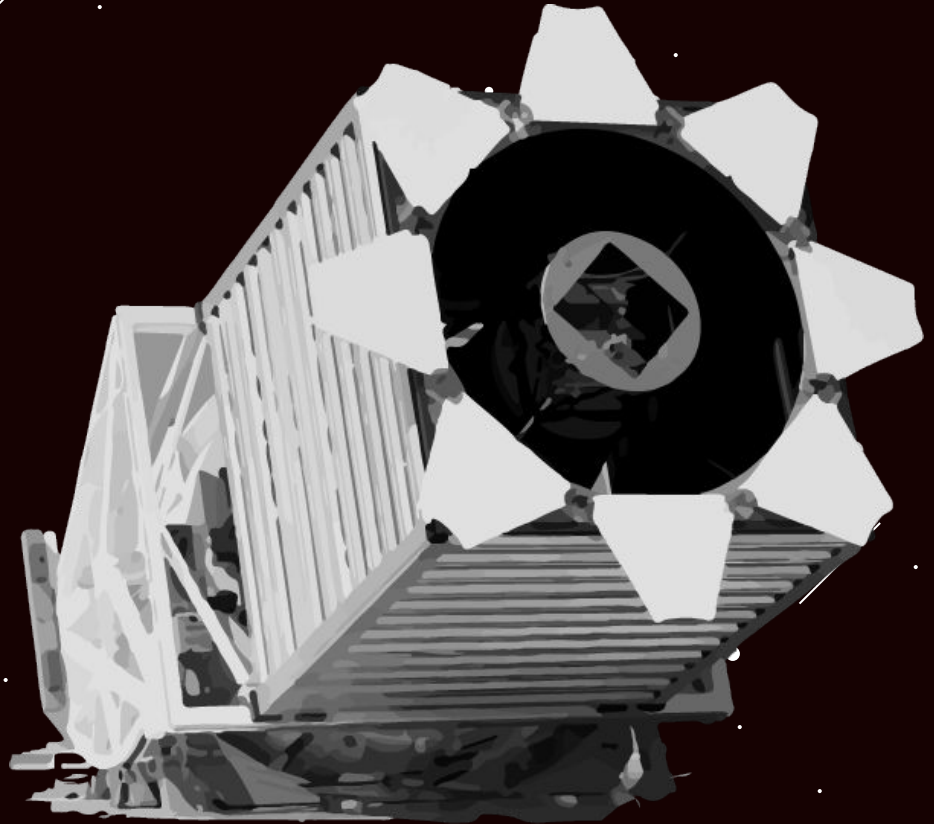
01 Proposal

Why this is necessary
research



Proposal:

- Reason for mapping the cosmos
- Precision and Sensitivity
- Exact locations



The Data

Using the Sloan Digital Survey
(SDSS)



10,000 observations



Our Targets classes are:
Stars, Galaxy's, Quasar's



Two distinct groups of
features

EDA



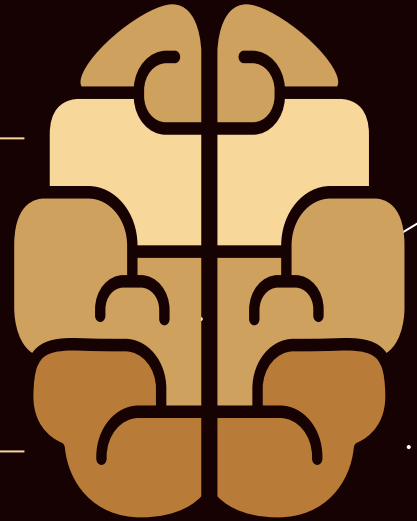
Keeping pertinent features and removing others



Interpreting the data with visuals

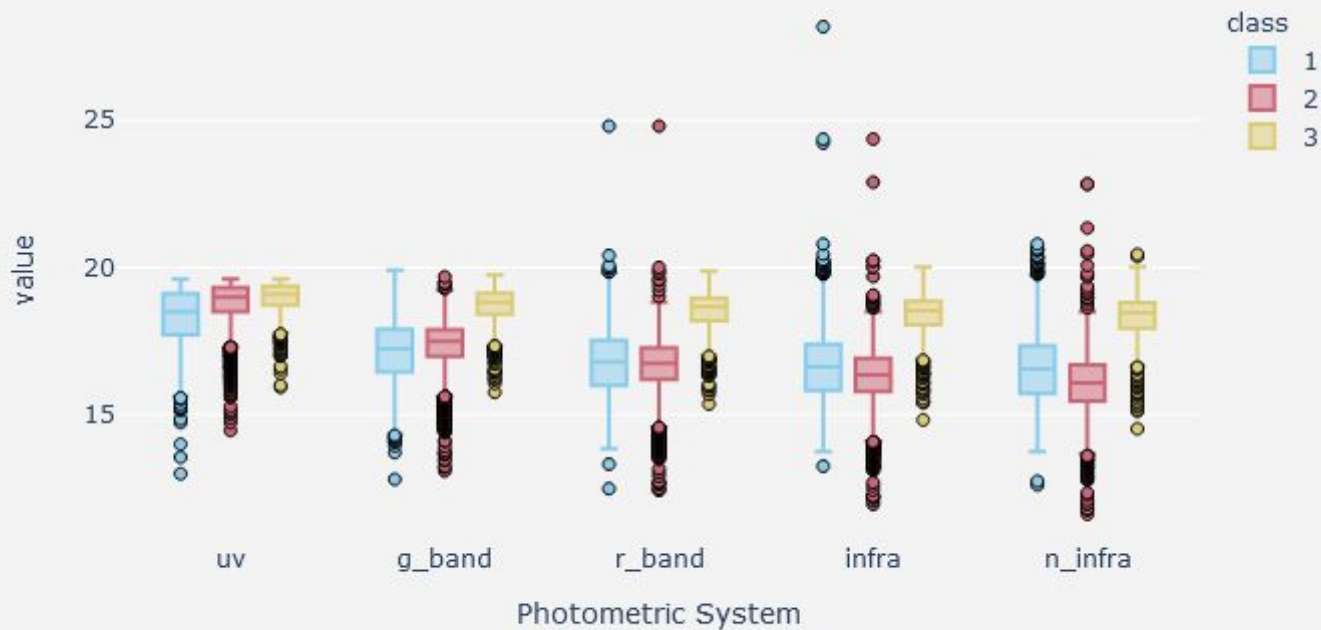


F1 score measurement

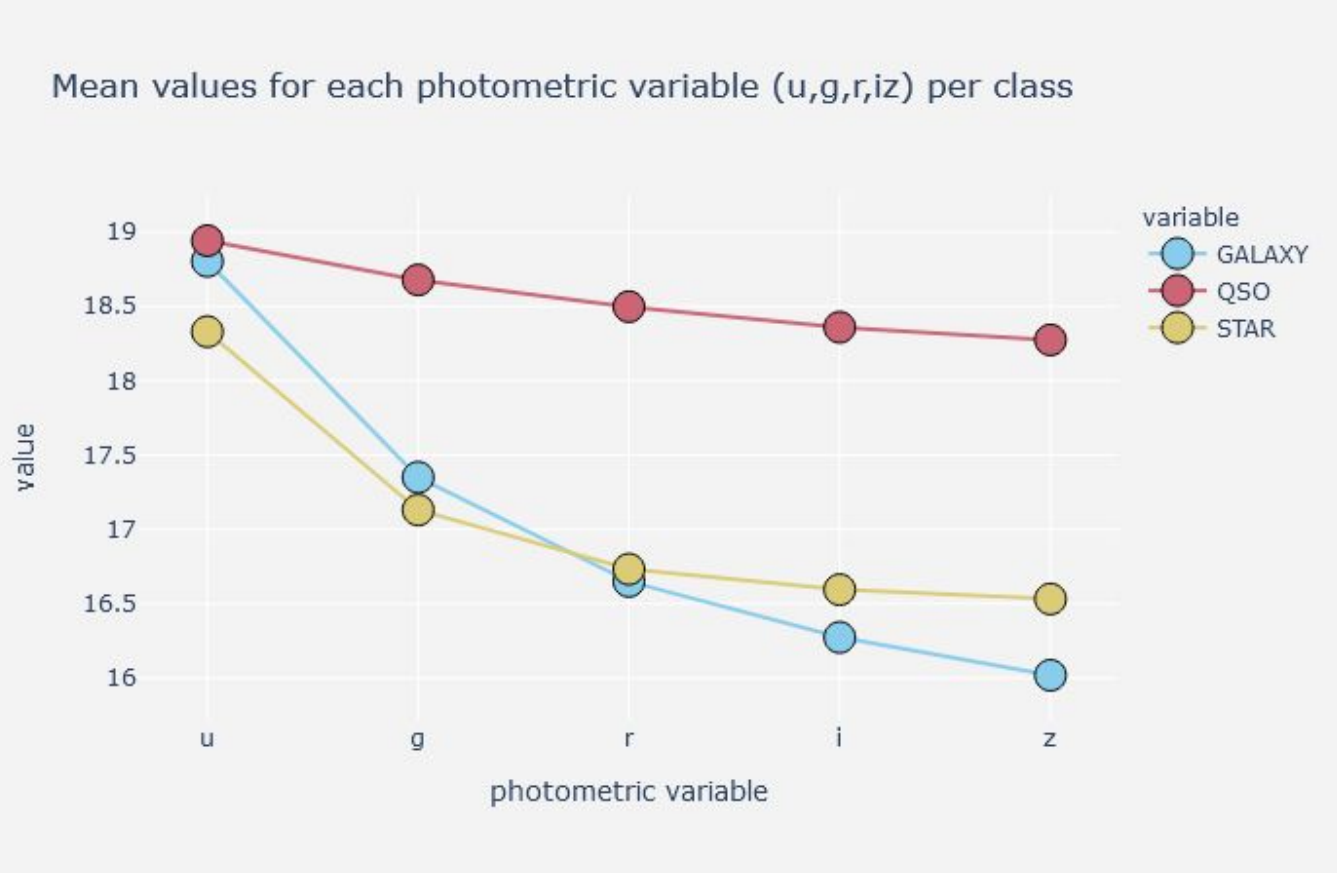


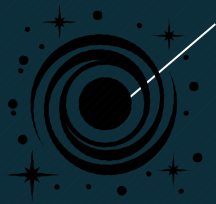
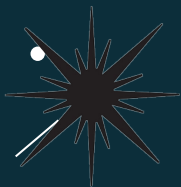
Outliers:

Box plots - Photometric System (u, g, r, i, z) by class

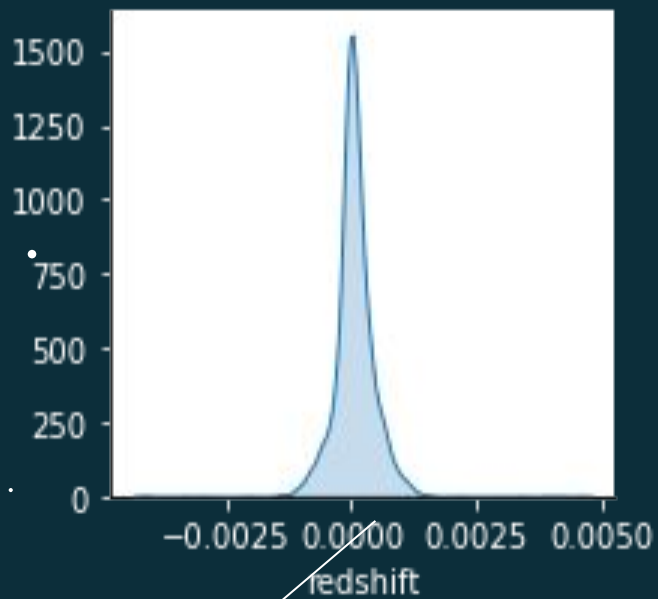


Photometric variable per class:

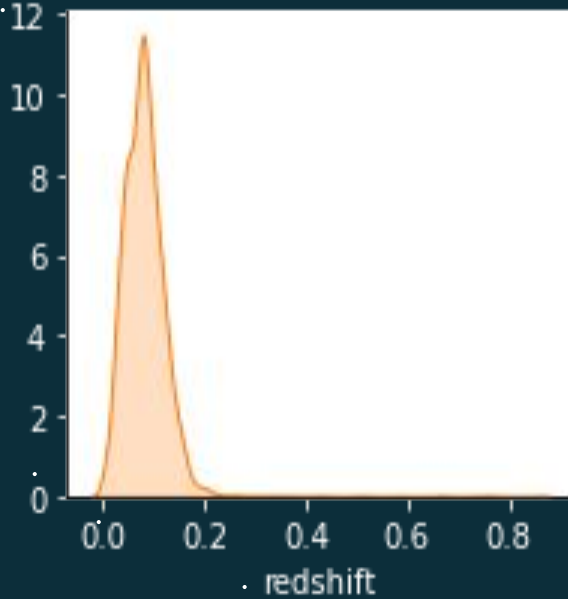




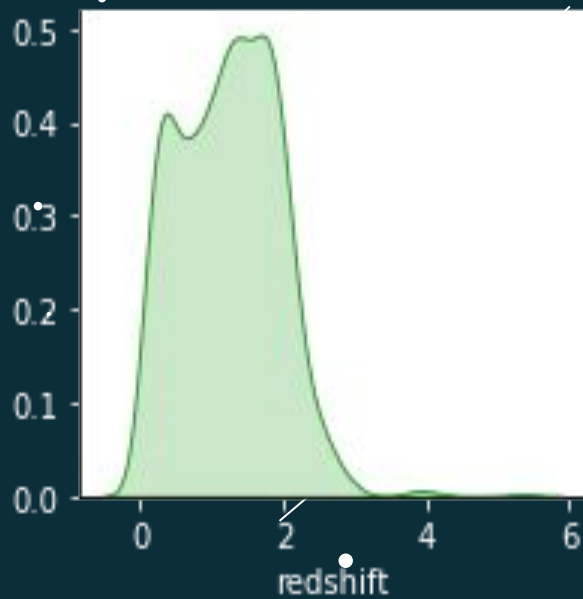
label = STAR



label = GALAXY



label = QSO



Random Forest



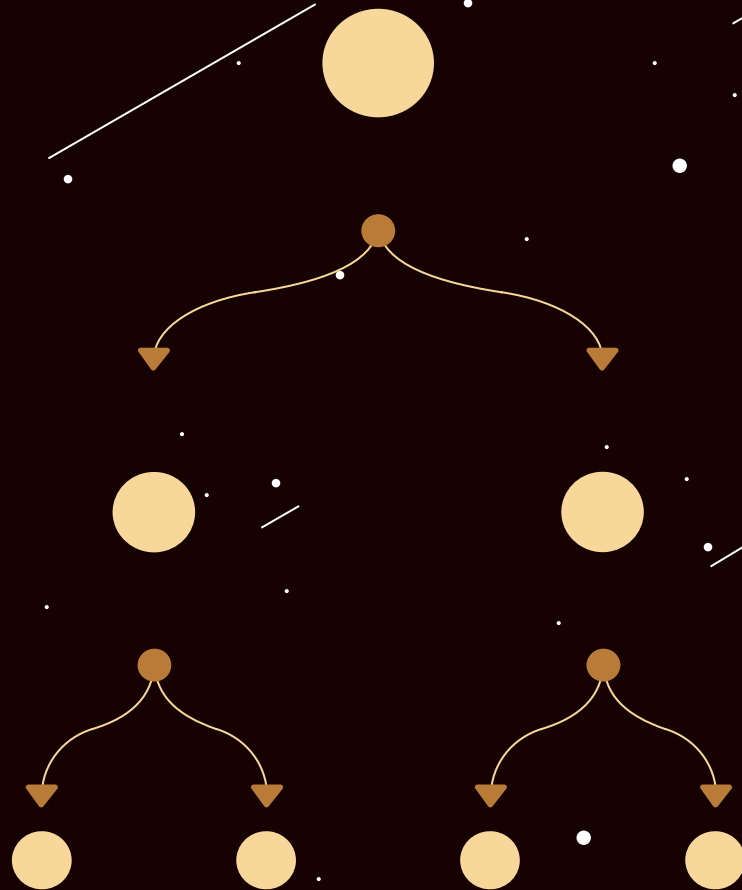
Tried various models



Random forest performance

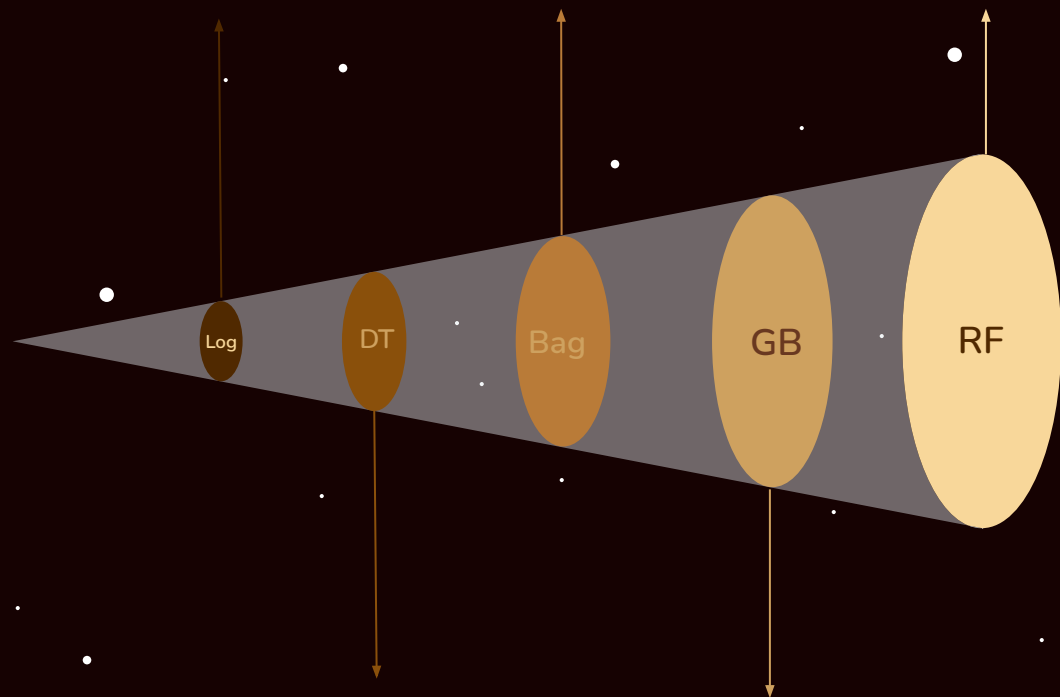


F1 scores comparison



Performances

F1 score of 5 best models



F1 Score: 0.992




Results:



Overall performance



Interpreting F1
Score



Where do we go from here?

- Next Steps
- Fine tuning

Further Resources:

SDSS

[SDSS website](#)

Glossary

[Features glossary](#)

SDSS Magnitudes

[Photometric
Magnitudes](#)

Another approach

[By Theodore Yoong](#)

SDSS dataset

[Kaggle Dataset](#)

NEPTUNE

It's the farthest planet
from the Sun



Guy Monahan



[Github](#)



[Linkedin](#)



[Email](#)

Rafael Ferreira



[Github](#)



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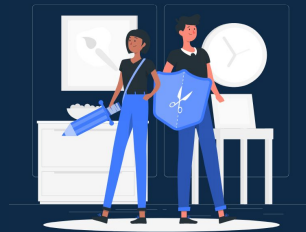
Pana



Amico



Bro



Rafiki



Cuate

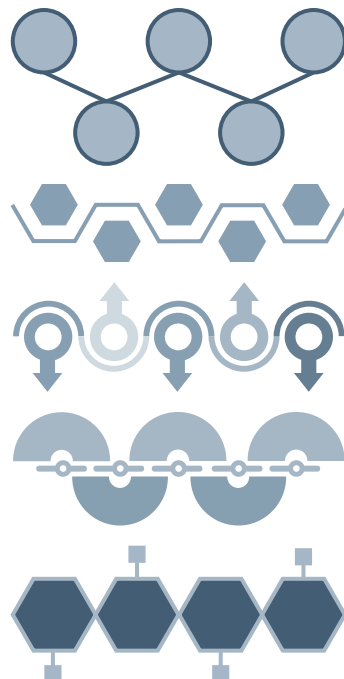
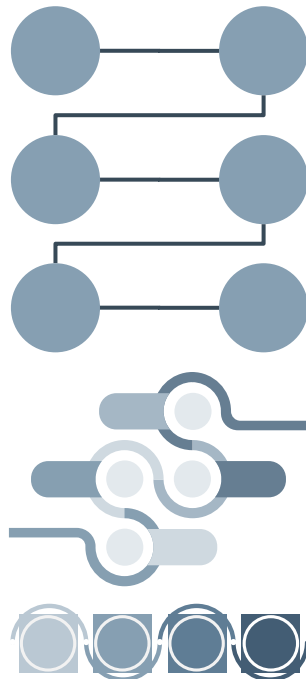
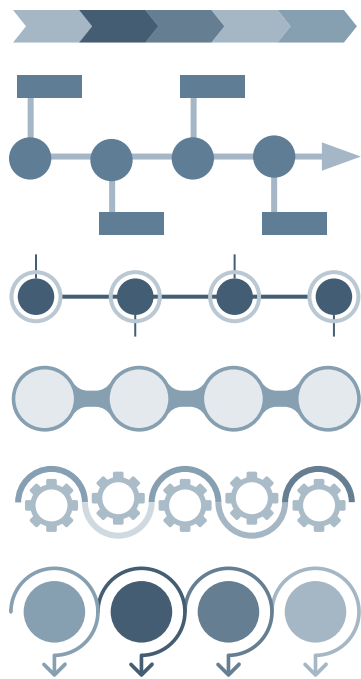
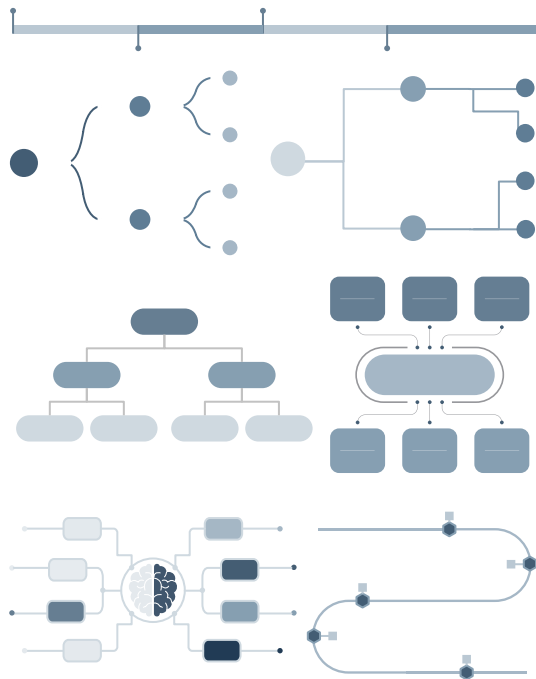
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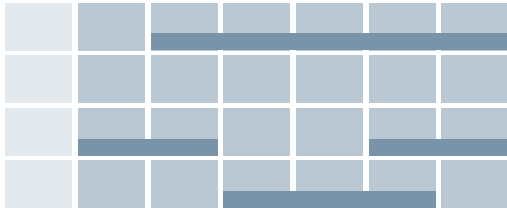
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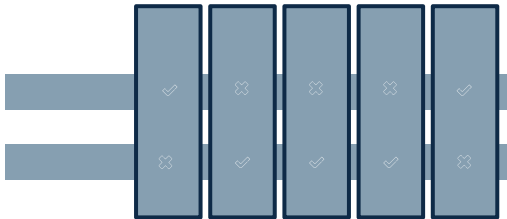
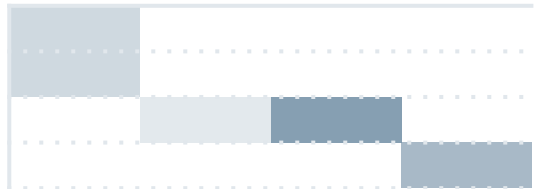
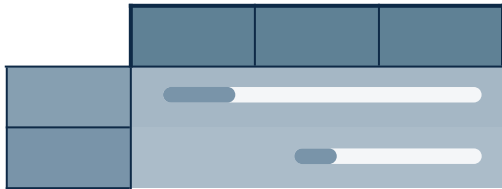
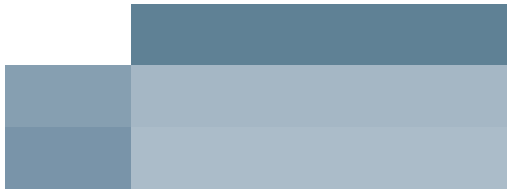
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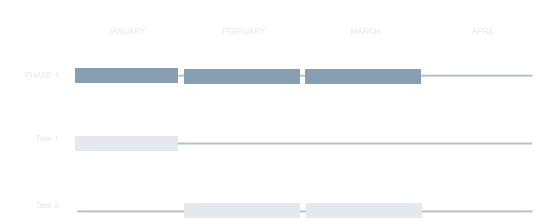


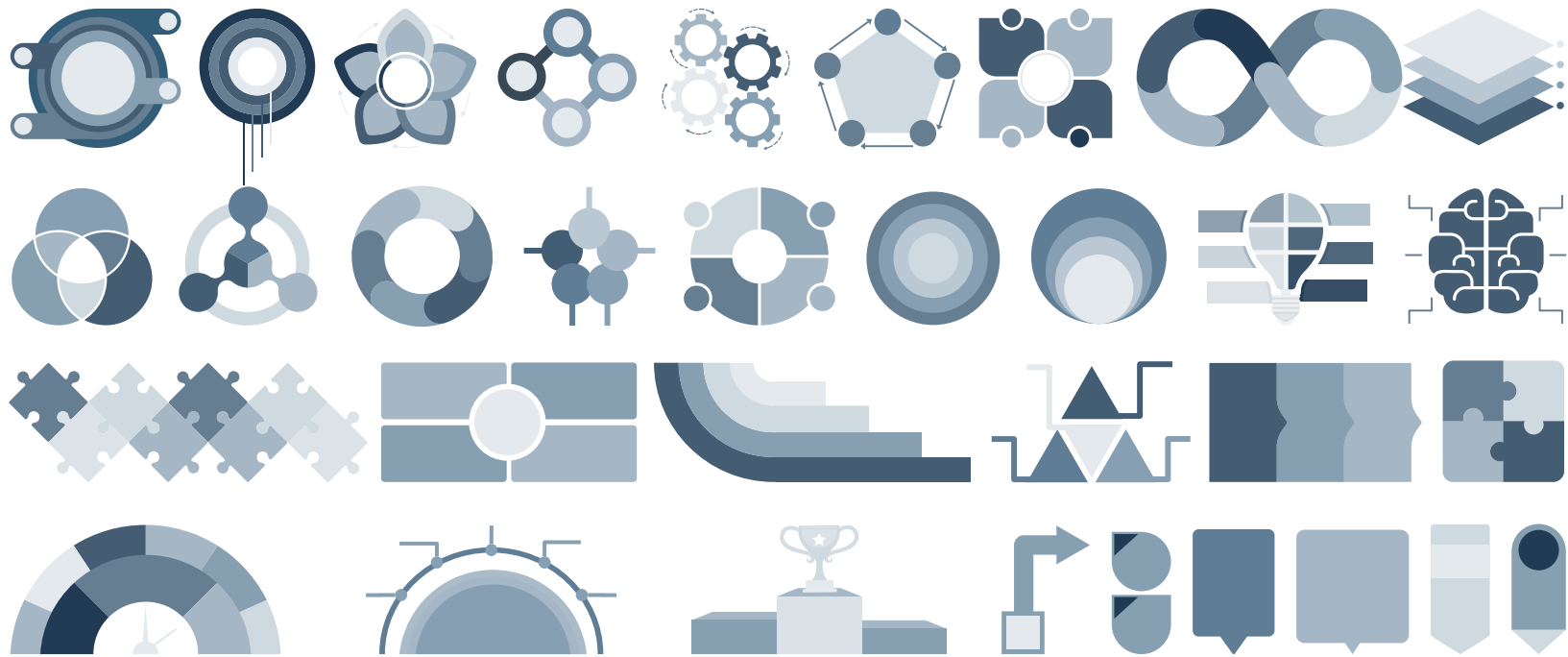


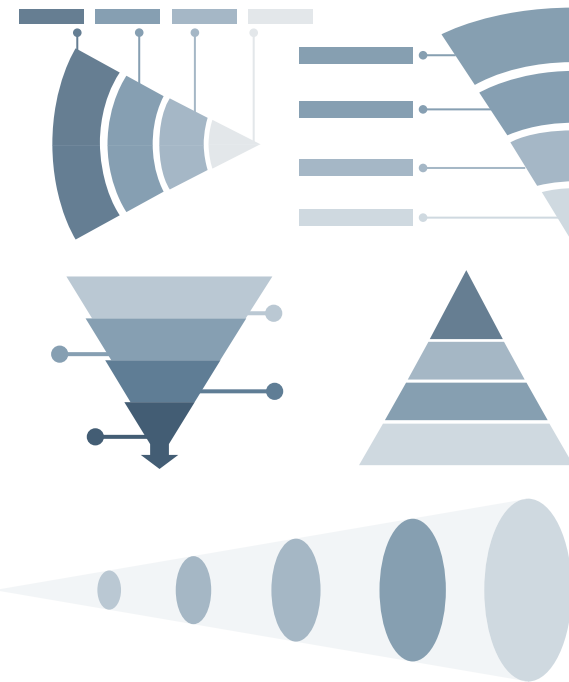
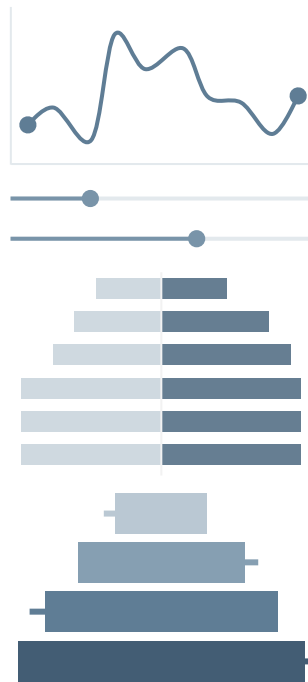












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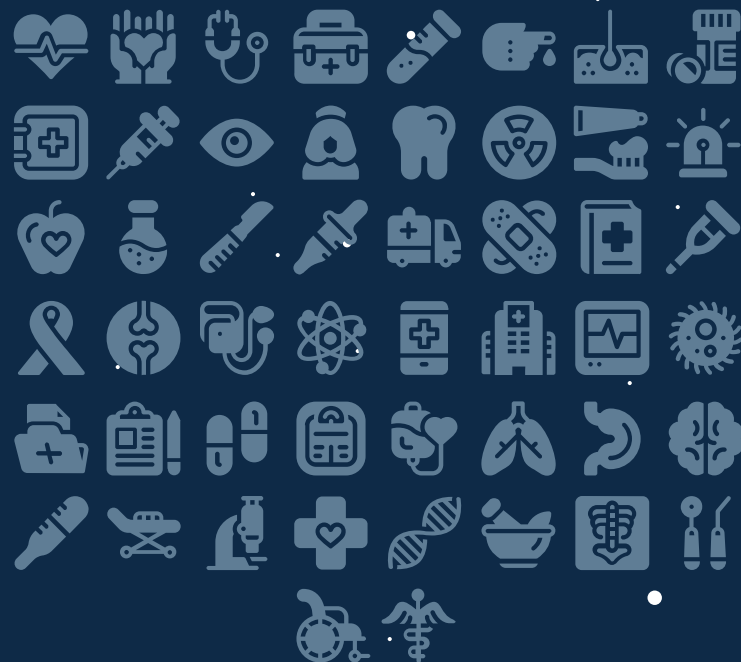
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Medical Icons



Business Icons



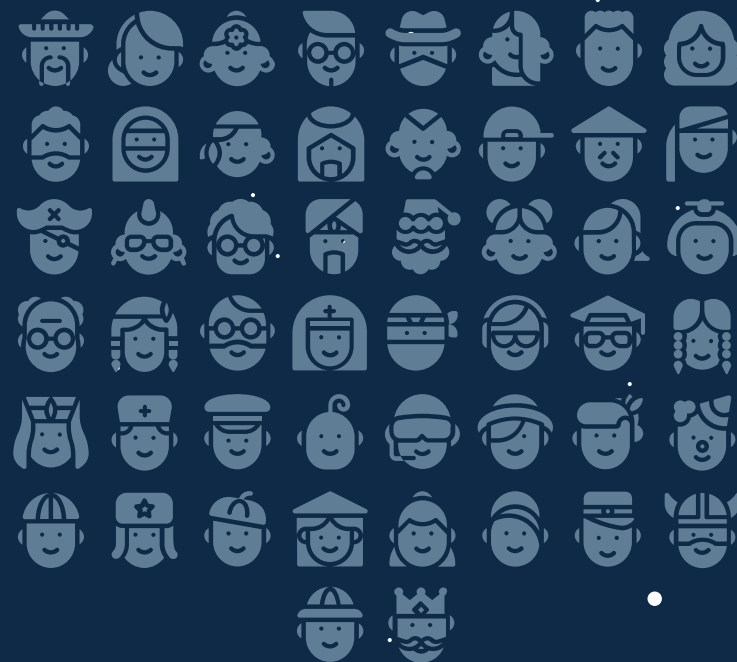
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