



**NONPARAMETRIC STATISTICS**  
**A.Y. 2023-2024**

# **ON BOARD GAMES AND HOW TO BUILD THEM:**

**A STUDY ON THE NEXT BEST BOARD GAME**



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# DATASET DESCRIPTION



Datasets come from the **BoardGameGeek** database containing relevant features.



Data are collected for games released **between 1950 and 2022**.



Additional **daily data snapshots** are available for each year from 2016 to the present.



# GOALS OF THE PROJECT



## Popularity

Can we characterise the most popular games in terms of features such as: theme, complexity, number of players, length...



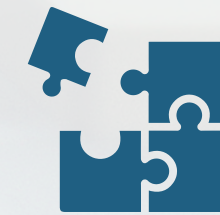
## Trends

Is there any trend?  
Do we expect some categories to be more popular in the coming months?



## Testing

Is our characterisation consistent if we specialised it on the most promising categories in terms of trends?



## Prediction

Are we able to select a few interesting projects from Kickstarter, to be proposed to the shareholders?



# TENTATIVE ANALYTIC WORKFLOW

**Testing** and **GLM/GAM** to select the most relevant features that characterise the most popular games. Can we make use of a **depth measure**?

**FDA techniques** on the 2500+ daily snapshots of the data available and **analysis on trends** for the popularity and the rank in terms of game category.

**Random forest** based model, to be compared to the previous results. Manual selection of ~20 Kickstarter projects and **model prediction**.