

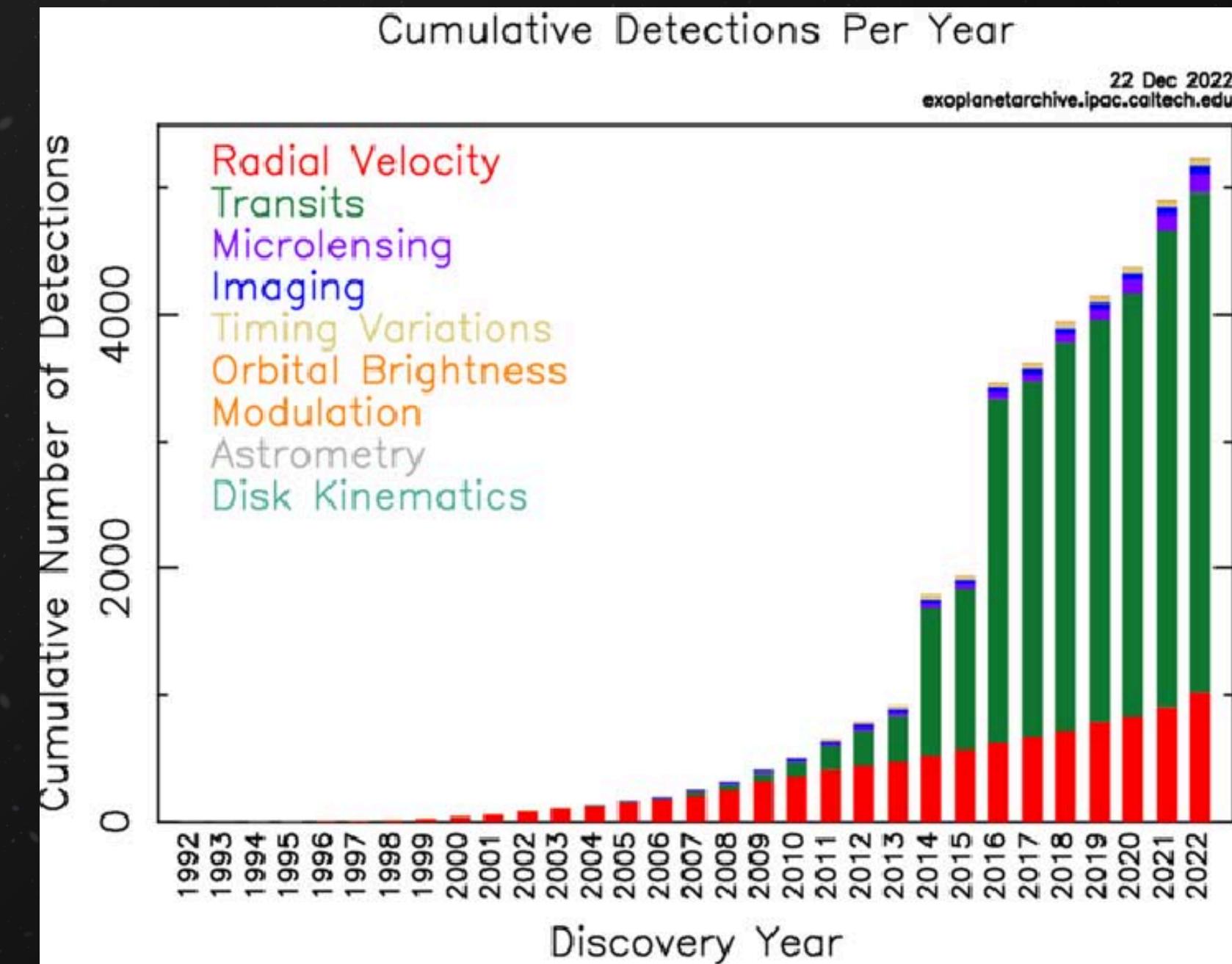
NAVIGATOR FOR THE HABITABLE WORLDS OBSERVATORY (HWO): MAPPING THE CHARACTERIZABLE EXOPLANETS IN OUR GALAXY

C O D I N G D U M M I E S



CHALLENGE

- Only 25 years of research
- Increasing amount of discovered exoplanets
- Present 5500 planets, approx. 12000 till year 2040
- Lack of data used to verification of results

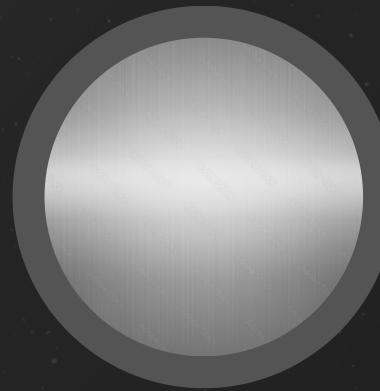


CONCEPT OF APPLICATION

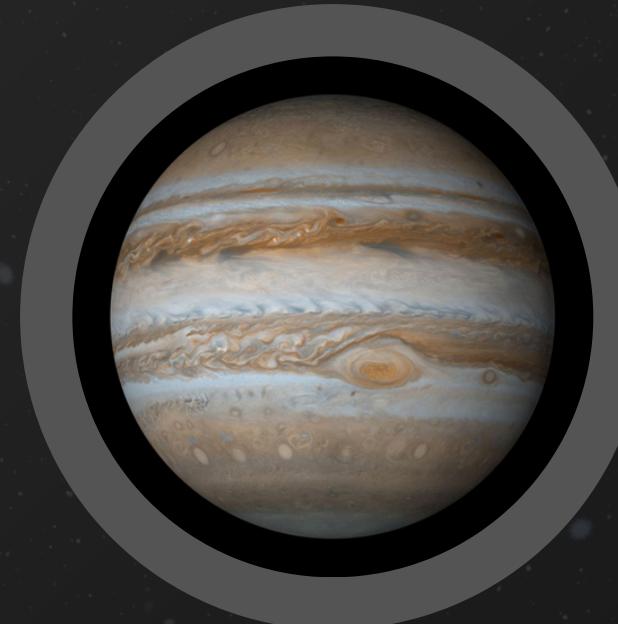
- Dedicated window application supporting data analysis
- Habitability score for planet based on point scale
- Simplifying classification of new date with use of machine learning
- Decreasing amount of work and money



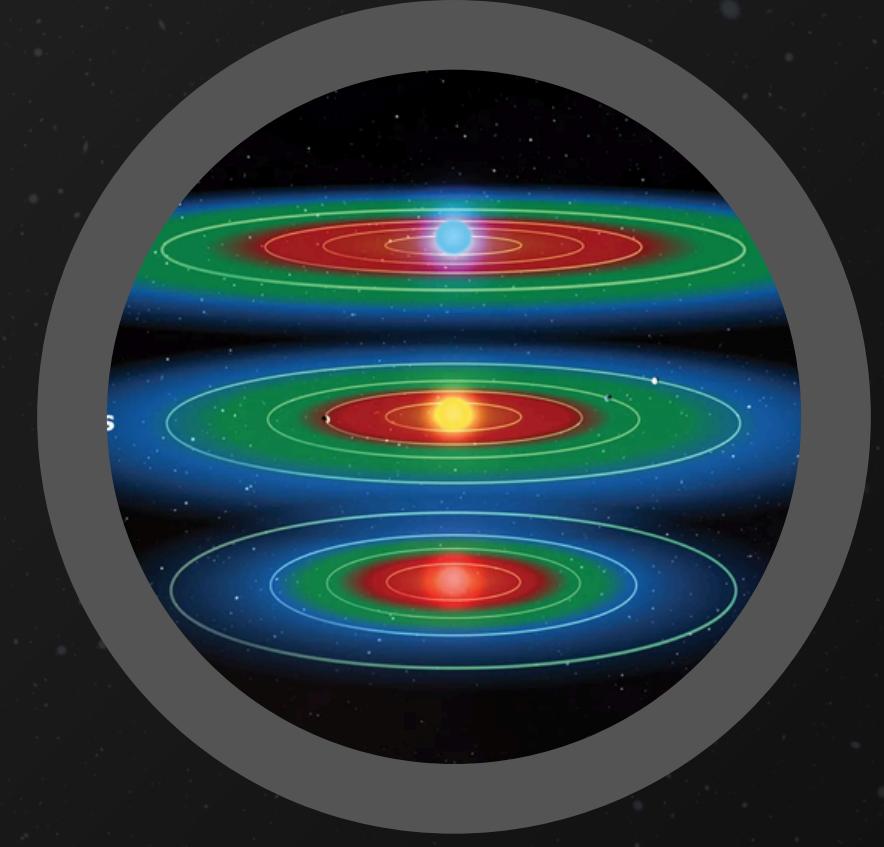
Assessments of Criteria



Stellar
Metallicity



Planet Mass



Habitability Zone (HZ)



Size of Planet

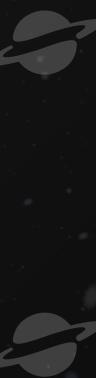
EXOPLANET DATA ANALYSER IN USE

The screenshot shows the 'Data Analyser' interface. At the top, there are three blue circular progress indicators followed by a horizontal bar. Below this is a table titled 'Data Analyser' with columns: pl_name, hostname, sy_snum, sy_pnum, discoverymethod, disc_year, and disc_facility. The table lists various exoplanets, their host stars, and discovery details. At the bottom of the table, there are buttons for 'Load CSV', 'Filter Habitat', 'AI Analysis', 'Load Model', and 'Export CSV'. A page navigation bar indicates 'Page 1 of 231' with 'Previous' and 'Next' buttons.

AI Analysis dialog box content:

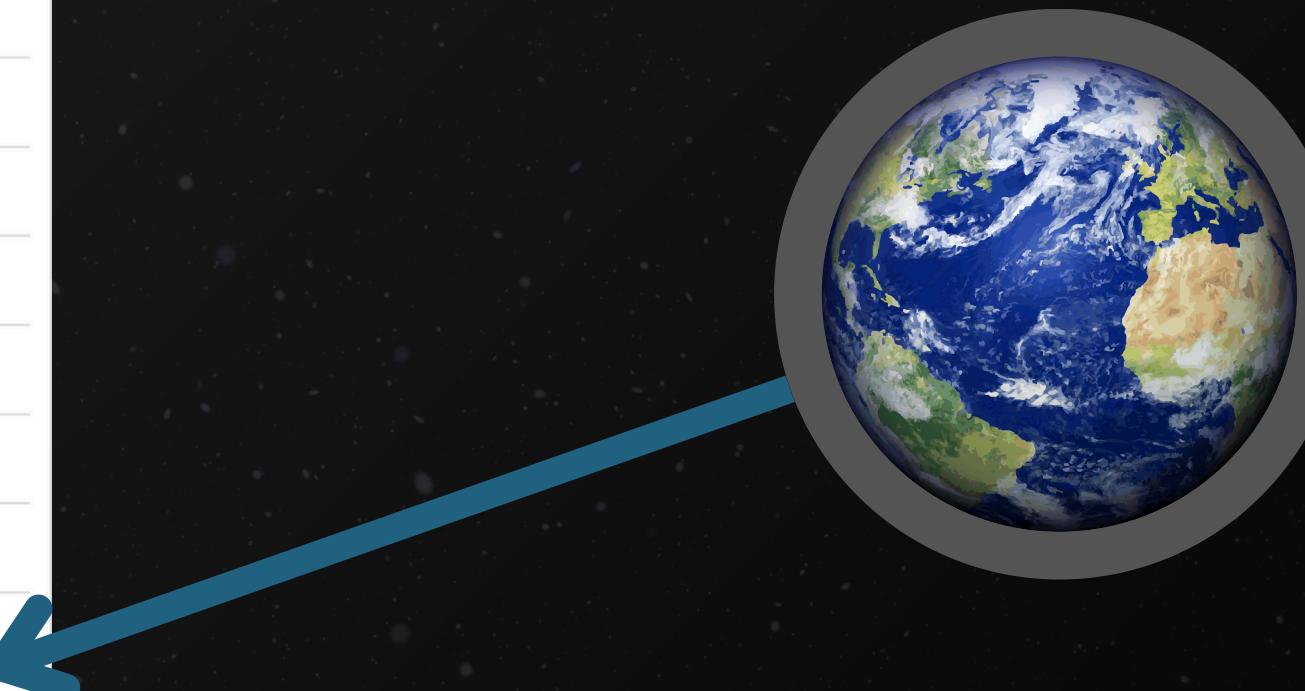
- AI Analysis
- The probability of being able to live is 76%.
- OK button

- selection of exoplaners with use of chosen criteria
- Division of the record base into parts, iterative training of the machine model
- Possibility to import your own model



VALIDATION

- 53 selected exoplanets
- Accuracy of the own machine model determined at 83%
- Earth habitability determined at 47 points



THANK YOU FOR YOUR ATTENTION

C O D I N G D U M M I E S

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References