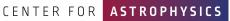
# **Knowledge Discovery Interest Group**

Raffaele D'Abrusco



HARVARD & SMITHSONIAN

### KD-IG session@2021FallInterOp

#### Three interesting talks

#### • A. Mahabal: Data Sheets and Model Cards

An approach to standardized description of datasets and models that can be used as benchmarks for KD applications in astronomy and can support data integration and creation of workflow

#### P. Skoda: SDSS redshift prediction based on Bayesian Deep Learning

Application of a Bayesian deep learning technique, which provides uncertainty estimations, to the problem of the determination of spectroscopic redshifts from low S/N, problematic spectra

#### R. Martinez-Galarza: Harvesting outliers: data barriers to turn anomalies into discoveries

Selection of anomalous objects from large astronomical datasets with DM methods and the inherent problem of interpretability when selection occurs in non-physical, indirect feature spaces

### $\oplus$ Open discussion regarding KD-IG priorities

### **KD-IG future**

### **Reinforce priorities**

- Making sure that data mining algorithms can run on non-tabular data types
  - Polymorphic data access
  - ⊕ Support DM-based labeling of data
- ⊙ Handling uncertainties and probabilistic measurements (pdf)

### **Collect new ideas**

- Stay abreast of new developments in KD-relevant methods
  - $\oplus$  Solicit a robust range of contributed talks for KD-IG sessions
  - ⊕ Invite members of interesting projects to speak at KD-IG sessions
  - Planning for a future IVOA InterOp plenary session with significant intra-IVOA and community involvement

## Set goals and modus operandi

- Discuss & Document needs and recommendations
  - ⊕ Regular, single-topic focused, "in-between InterOps" meetings
  - Drafting an implementation note
  - $\oplus$  Document one or a few related recommendations in a note

# <Insert classical Uncle Sam's "We want you" image>

If you are interested in being the V Chair for KD, please send a note to the IVOA Executive committee (or contact me if you want to know more before).

#### Staying in touch

- E-mail: kdd@ivoa.net
- Glack: IVOA#kdd

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