2025 +

What will ADS be when computing/storage is *another* million times more powerful?

We are building tools to create services

Vector spaces, text mining, network analysis, …
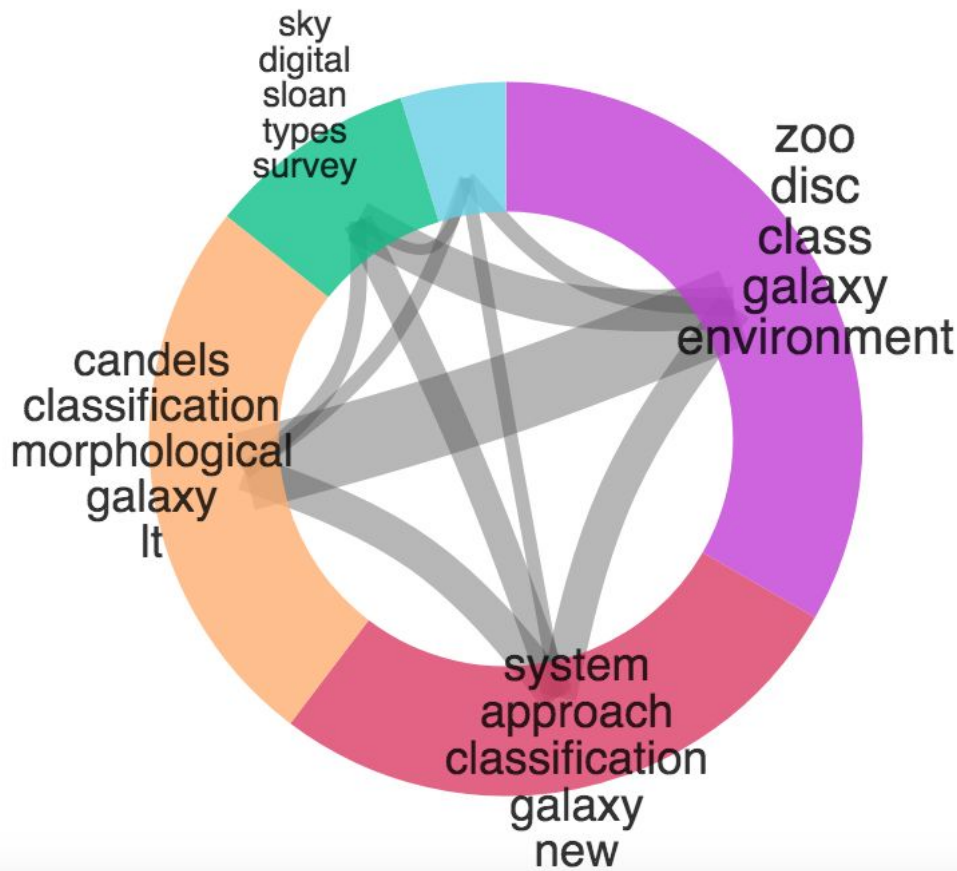
Computational Linguistics is growing VERY rapidly

Knowledge Engineering - no one way to build a bridge

Henneken+ 2010 Recommender

1. Create reduced keyword system 997 KWs
2. Create 997 dim vector space
3. Create vectors for recent astro papers by using KWs of references
4. Use SVD to reduce dim to 50
5. Create reader vectors as sum of read article vectors
6. Cluster readers with K-means 64 clusters
7. Use SVD to create 64 5 dim spaces, populate them with recent papers
8. For new paper find relevant cluster, find nearest 40 papers
9. Use SIMBAD to find all objects in the 40 papers
10. Recommendation is paper referring to largest number of these objects

Paper Network Integrating human and machine intelligence in galaxy morphology classification tasks

sky
digital
sloan
types
survey

candels
classification
morphological
galaxy
lt

zoo
disc
class
galaxy
environment

system
approach
classification
galaxy
new

Group 2: classification, distributions, system, new, approach, galaxy

⏷ add group to filter

This group consists of **17** papers, which have been cited, in total, **15124** times.

Papers in this group:

SExtractor: Software for source extraction.; *Bertin, E.* (6359 citations)
Galaxy morphology in rich clusters: implications for the formation and evolution of galaxies.; *Dressler, A.* (2633 citations)
Detailed Structural Decomposition of Galaxy Images; *Peng, Chien Y.* (1544 citations)
Secular Evolution and the Formation of Pseudobulges in Disk Galaxies; *Kormendy, John* (1132 citations)
The Relationship between Stellar Light Distributions of Galaxies and Their Formation Histories; *Conselice, Christopher J.* (458 citations)
Galaxy morphology to I=25 mag in the Hubble Deep Field; *Abraham, R. G.* (426 citations)
A New Nonparametric Approach to Galaxy Morphological Classification; *Lotz, Jennifer M.* (386 citations)
A new classification system for galaxies.; *van den Bergh, S.* (373 citations)
Brightness distributions in compact and normal galaxies. III. Decomposition of observed profiles in spheroid and disk components.; *Kormendy, J.* (325 citations)
The Asymmetry of Galaxies: Physical Morphology for Nearby and High-Redshift Galaxies; *Conselice, Christopher J.* (305 citations)
New Observations and a Photographic Atlas of Polar-Ring Galaxies; *Whitmore, Bradley C.* (283 citations)
A New Approach to Galaxy Morphology. I. Analysis of the Sloan Digital Sky Survey Early Data Release; *Abraham, Roberto G.* (244 citations)
The Morphologies of Distant Galaxies. I. an Automated Classification; *Abraham, Roberto G.* (238 citations)

⏶ Top

QUICK FIELD: Author   First Author   Abstract   Year   Fulltext   All Search Terms ▾

← Start New Search

similar(2018MNRAS.476.5516B) year:2017-2018   ✕   🔍

Your search returned **762,476** results

⬇︎ Score ▾   ↪ Export ▾   📊 Explore ▾

▾ AUTHORS

☐ Show highlights   ☐ Show abstracts   ☐ Hide Sidebars   Go To Bottom

> ☐ Wang, Y   8.9k
> ☐ Zhang, Y   8.2k
> ☐ Li, Y   6.9k
> ☐ Wang, J   6.7k
> ☐ Liu, Y   6.6k

   more

1 ☐ 2018PhDT........16B   2018   📄 ☰ 🗄
Integrating Human and Machine Intelligence in Galaxy Morphology Classification Tasks
Beck, Melanie Renee

2 ☐ 2018AAS...23136203F   2018/01   📄 ☰ 🗄
Zooniverse: Combining Human and Machine Classifiers for the Big Survey Era
Fortson, Lucy; Wright, Darryl; Beck, Melanie *and 9 more*

▾ COLLECTIONS

☐ physics   507.6k
☐ general   234.5k
☐ astronomy   97.8k

3 ☐ 2018MNRAS.473.1108H   2018/01   cited: 5   📄 ☰ 🗄
An automatic taxonomy of galaxy morphology using unsupervised machine learning
Hocking, Alex; Geach, James E.; Sun, Yi *and 1 more*

4 ☐ 2017MNRAS.464.4420S   2017/02   cited: 13   📄 ☰ 🗄
Galaxy Zoo: quantitative visual morphological classifications for 48 000 galaxies from CANDELS
Simmons, B. D.; Lintott, Chris; Willett, Kyle W. *and 46 more*

▾ REFEREED

☐ non-refereed   392.7k
☐ refereed   369.4k

5 ☐ 2018MNRAS.476.3661D   2018/05   cited: 8   📄 ☰ 🗄
Improving galaxy morphologies for SDSS with Deep Learning

> ▾ KEYWORDS
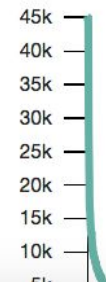
Read about **the ADS search transition** and **Classic search translator**

Send Query to Classic   Send Query to the new ADS   Store Default Form   Clear

Databases to query: ☑ **Astronomy**   ☐ **Physics**   ☑ **arXiv e-prints**

Authors: (Last, First M, one per line)   ☑ **SIMBAD** ☑ **NED** ☑ ADS **Objects**
☐ **Exact name matching**   **Object name**/**position search**
☐ Require author for selection   ☐ Require object for selection
(⦿ OR ◯ AND ◯ **simple logic**)   (Combine with: ⦿ OR ◯ AND)

Publication Date between [ ] [2017] and [ ] [2018]
                            (MM) (YYYY)   (MM) (YYYY)

Enter Title Words   ☐ Require title for selection
(Combine with: ⦿ OR ◯ AND ◯ **simple logic** ◯ **boolean logic**)

Enter Abstract Words/Keywords   ☐ Require text for selection
(Combine with: ⦿ OR ◯ AND ◯ **simple logic** ◯ **boolean logic**)
Forest algorithm requires a minimal amount of computational cost, this
result has important implications for galaxy morphology identification tasks
in the era of Euclid and other large-scale surveys.

Return [200] items starting with number [1]

Search within articles using the new ADS UI

myADS: Personalized notification service

| 1 | ☐ 2018MNRAS.476.5516B | 1.000 | 06/2018 | A | E | F | X | | R C | | U |

Beck, Melanie R.; Scarlata, Claudia; Fortson, Lucy F.; Integrating human and machine intelligence in galaxy morphology classification tasks
Lintott, Chris J.; Simmons, B. D.;
Galloway, Melanie A.; Willett, Kyle W.;
Dickinson, Hugh; Masters, Karen L.;
Marshall, Philip J.; Wright, Darryl

| 2 | ☐ 2018PhDT........16B | 0.898 | 00/2018 | A | E |

Beck, Melanie Renee   Integrating Human and Machine Intelligence in Galaxy Morphology Classification Tasks

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| 3 | ☐ 2018AAS...23136203F | 0.271 | 01/2018 | A |

Fortson, Lucy; Wright, Darryl; Beck, Melanie;   Zooniverse: Combining Human and Machine Classifiers for the Big Survey Era
Lintott, Chris; Scarlata, Claudia; Dickinson, Hugh;
Trouille, Laura; Willi, Marco; Laraia, Michael;
Boyer, Amy; and 2 coauthors

| 4 | ☐ 2017EGUGA..19.1189B | 0.253 | 04/2017 | A | F |

Brook, Anna; Sahar, Nir   Quantitative detection of settled coal dust over green canopy

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| 5 | ☐ 2017A&A...603A.117S | 0.235 | 07/2017 | A | E F | X | | R C | S | U |

Süveges, M.; Barblan, F.; Lecoeur-Taïbi, I.; Prša, A.;   Gaia eclipsing binary and multiple systems. Supervised classification and self-organizing maps
Holl, B.; Eyer, L.; Kochoska, A.; Mowlavi, N.;
Rimoldini, L.

| 6 | ☐ 2018PASP..130l8001T | 0.226 | 12/2018 | A | E F | | | R | | U |

Tachibana, Yutaro; Miller, A. A.   A Morphological Classification Model to Identify Unresolved PanSTARRS1 Sources: Application in the ZTF Real-time Pipeline

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| 7 | ☐ 2017CQGra..34f4003Z | 0.224 | 03/2017 | A | E | X | | R C | | U |

Zevin, M.; Coughlin, S.; Bahaadini, S.; Besler, E.;   Gravity Spy: integrating advanced LIGO detector characterization, machine learning, and citizen science
Rohani, N.; Allen, S.; Cabero, M.; Crowston, K.;
Katsaggelos, A. K.; Larson, S. L.; and 8 coauthors

| 8 | ☐ 2017nova.pres.2175K | 0.213 | 04/2017 | A | E |

Kohler, Susanna   PACMan to Help Sort Hubble Proposals