

Improving Data Discoverability with Folksonomy to Taxonomy Integration

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What we have already

OSF Search

All OSF Results 2063

- Files 2005
- Projects 30
- Registrations 23
- Preprints 3
- Components 2
- SHARE 2369

Improve your search:

- visual search Visual search Hybrid search
- raw data Aging open data Attention
- Visual Search attention attentional capture

1. Search field

2. Categories
(sometimes)

3. User tags

Starting point



Filtering



Further clarification

How it works

Search results at Zenodo

Folksonomy

Access Right

- Open (16)

File Type

- Pdf (11)
- R (3)
- Rdata (3)
- Zip (2)
- Xml (1)

Keywords

- Eye (5)
- Visual (5)
- Tracking (4)
- Attention (3)
- Learning (3)
- Associative (2)
- Hci (2)
- 360 (1)
- A (1)
- Accidental (1)

Type

- Publication (8) +

Search results:

- May 26, 2015 (v1)** Conference paper | Open Access
Where Is Waldo? - Visual Search Behavior in Wimmelpictures
Liegl, S.; Fritsch, R.; Tullius, G.;
In order to explore an image, the human eye functions like a spotlight, scanning the content from one object to the next. This visual search behavior is implemented with the help of attention control. The following work surveys the visual search behavior in "Wimmelpictures", a special ty
Uploaded on May 26, 2015
- August 25, 2016 (v1)** Dataset | Open Access
Visual reinforcement shapes eye movements in visual search
Paeye, Céline; Schütz, Alexander C.; Gegenfurtner, Karl R.;
Dataset from the following publication: Paeye, C., Schütz, A. C., & Gegenfurtner, K. R. (2016). Visual reinforcement shapes eye movements in visual search. Journal of Vision, 16(10):15, 1–15. doi:10.1167/16.10.15
Uploaded on May 31, 2017
- July 7, 2017 (v1)** Dataset | Open Access
Reward draws the eye, uncertainty holds the eye: Associative learning modulates distracter interference in visual search.
Koenig, Stephan; Kadel, Hanna; Uengoer, Metin; Schubö, Anna; Lachnit, Harald;
Eye tracking data and statistical analysis of: Koenig, S., Kadel, H., Uengoer, M., Schubö, A., & Lachnit, H. (2017). Reward draws the eye, uncertainty holds the eye: Associative learning modulates distracter interference in visual search. Frontiers in Behavioral Neuroscience. doi: 10.3389/fnbe
Uploaded on July 7, 2017
- May 25, 2017 (v1)** Dataset | Open Access
Context modulation of learned attention deployment.
Uengoer, Metin; Pearce, John M.; Lachnit, Harald; Koenig, Stephan;
Eye tracking data and statistical analysis of: Uengoer, M., Pearce, J. M., Lachnit, H., & Koenig, S. (2017). Context modulation of learned attention deployment
Reward draws the eye, uncertainty holds the eye: Associative learning modulates distracter interference in visual search. Learning &
Uploaded on July 12, 2017

Taxonomy

The problem

Search results for “visual search”:

Repository	Items founded	“Useful” items	Tags provided
OSF	20 projects, 1999 files	9	3
figshare	0 projects, 123 datasets	10	10*
Dryad	5 projects, 0 files	3	3
Zenodo	4	4	3

*figshare has mandatory tagging for public projects

Tags problems

- Majority of tags are unique
(116 tags overall, 86 of them are unique, only 4 more than 2 times)
- No differentiation in the field of science
(psychology, biology, machine learning)
- Tags not always useful (i.e. “task” or “result”)

Users need guidance to
provide good tags

Taxonomy-directed folksonomies

- myEdna (Hayman, S., & Lothian, N. (2007). Taxonomy directed folksonomies)
- TaxoFolk (Kui, C., & Tsui, E. (2011). TaxoFolk: A hybrid taxonomy-folksonomy structure for knowledge classification and navigation)

Metadata taxonomies

For general metadata aspects

e.g. Dublin Core properties:

Content: Title, Subject, Description, Type, Source, Relation, Coverage

Intellectual Property: Creator, Publisher, Contributor, Rights

Instantiation: Date, Format, Identifier, Language

For different types of content

e.g. BrainMap classes:

Paper-level: Citation, Submitter, Abstract, Prose Description, Subject Groups, Conditions, Sessions, Imaging, Results Synopsis, Feedback

Experiment-level: Context, Contrast, Paradigm Class, Behavioral Domain, Locations

For domain-specific information

1. Research areas classifications (WoS, OECD)

2. Inside a research area (MIBBI standards for biological studies)

Facets example

General-level

- Authors
- Access
- Content
 - Type
 - Format

Automatic

Dataset-level

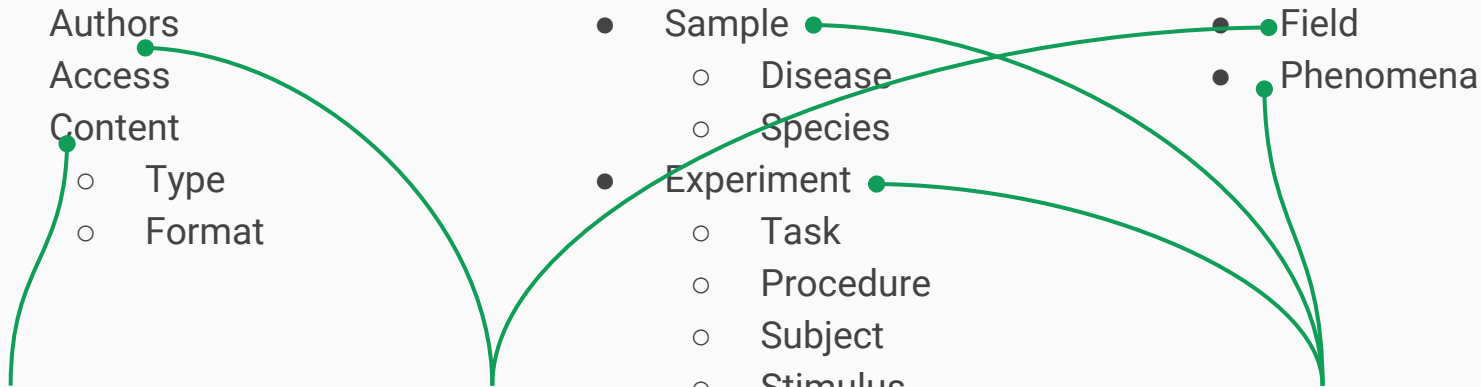
- Sample
 - Disease
 - Species
- Experiment
 - Task
 - Procedure
 - Subject
 - Stimulus

Semi-automatic

Domain-level

- Field
- Phenomena

Folksonomic



Tags integration

General Dataset/Sample

Dataset/Experiment

Domain-specific

Access	Sample	Task	Procedure	Subject	Stimulus	Phenomena	Uncategorized
dataset	adhd	visual search	associative learning	humans	camouflage	attention	concept
open data	awd	discrimination learning	cognitive control	ideal observer	Animal coloration	attentional	Conceptual Proces
raw data	deuteranomaly	distractor exclusion	decision experiment		Anti-predator colorat	attentional temp	context
		distractors distribution	fear conditioning		background comple	color vision	coordination
		ensemble representation	search display		Defensive coloration	color vision defic	Crypsis
		learning of probability	real world behavior		line orientation	decision-making	difficulty
		head orientation	Visual Attention Modulation		Multiple Object Trac	search strategie	duration
		negative cues	Bayesian inference		Multiple Target Sear	summary	e.g
		oculomotor capture	eye movements		orientation discrimin	visual attention	finding
		perceptual load	eye tracker		stimulus correlation	visual perceptior	Head Direction Pe
		priming of pop-out	head movements			visual statistics	literacy

Computational
experiment?

What do you think?