Knowledge extraction from archives of natural history collections
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Acronyms

AI artificial intelligence. 15, 118, 122, 153, 157
ALICE Artificial Intelligence and Cognitive Engineering. iv, 13
ANN artificial neural network. 25, 26, 27, 81
API Application Programming Interface. 35, 63, 64, 74
BHL Biodiversity Heritage Library. 35, 61, 78, 79, 98, 101, 105, 110, 117, 118, 121
BLSTM bilateral long short-term memory network. 28, 43, 45, 82, 83, 84, 86, 87
CE Concatenated Embedding. 101
CH cultural heritage. 50
CNN convolutional neural networks. 27, 28, 81, 82, 84, 85, 86, 87, 94, 99
COL Catalogue of Life. 117
DC Dublin Core. 61, 62
DIAR Document Image Analysis and Recognition. 77, 79
DNN deep (artificial) neural network. 25, 26, 28
DSW Darwin Core Semantic Web. 53, 54, 56, 57, 58, 83
DwC Darwin Core. 31, 41, 42, 53, 54, 56, 57, 58, 61, 62, 63, 64, 79
EOL Encyclopedia of Life. 35

FAIR Findable, Accessible, Interoperable, and Reusable. 8, 10, 31, 48, 49, 120, 121, 122, 148, 150
Acronyms

**FOAF** Friend Of A Friend. 59

**FP** Fused Prototype. 92, 98, 102, 116

**FSL** few-shot learning. 28, 29, 102

**GBIF** Global Biodiversity Data Facility. 35, 42, 62, 96, 98, 101, 105, 117, 121

**GLAMs** Galleries, Libraries, Archives and Museums. 37, 40, 42, 45

**GZSL** generalised zero-shot learning. 94, 95, 112, 114

**HMM** Hidden Markov Model. 43

**HPL** Hierarchical Prototype Loss. 92, 98, 102, 103, 112, 116

**HTR** Handwritten Text Recognition. 6, 13, 38, 39, 41, 43, 44, 45, 46, 77, 78, 79, 81, 88, 121, 122

**IIIF** International Image Interoperability Framework. 72, 74

**IRI** Internationalised Resource Identifier. 8, 33, 39, 48, 50, 52, 53, 54, 60, 62, 63, 65, 67, 68, 85

**IUCN** International Union for Conservation of Nature and Natural Resources. 35

**JSON** JavaScript Object Notation. 64

**KRR** knowledge representation and reasoning. 22, 30, 119

**LCDS** Leiden Centre of Data Science. iv

**LD** Linked Data. 30, 48

**LIACS** Leiden Institute of Advanced Computer Science. iv, 13, 153, 157, 158

**LINNAE** LInking Notes of NAturE. 11, 72, 159

**LOD** Linked Open Data. 11, 120

**LSTM** long short-term memory network. 28, 83

**MIDS** Minimum Information about a Digital Specimen. 47

**MLP** multi-layer perceptron. 26, 27, 28, 82, 84, 86, 87
Acronyms

MODS Metadata Object Description Schema. 61

NBC Naturalis Biodiversity Center. iv, 1, 2, 3, 13, 18, 36, 54

NC Committee for Natural History of the Netherlands Indies (“Natuurkundige Commissie voor Nederlands-Indië”). 1, 2, 13, 20, 35, 51, 66, 72, 88

NCD Natural Collections Description. 41, 61, 62

NCO Natural Committee Online. 13

NER named entity recognition. 45

NERC named entity recognition and classification. 7, 11, 22, 24, 44, 46, 48, 75, 78, 79, 82, 120, 121

NHC natural history collection. i, 3, 5, 6, 7, 9, 10, 11, 12, 13, 17, 34, 47, 49, 54, 56, 57, 60, 61, 62, 63, 68, 69, 77, 78, 81, 83, 87, 89, 117, 118, 119, 120, 121, 122, 147

NLP natural language processing. 38, 44, 75

NMNH Smithsonian National Museum of Natural History. 61

OBIE ontology-based information extraction. 45

OCR Optical Character Recognition. 6, 35, 39, 43, 79

OOV out-of-vocabulary. 6

OWL Web Ontology Language. 33, 50, 52, 83

PNL Prototypical Network Loss. 99, 103, 112

RDF Resource Description Framework. 8, 33, 34, 45, 53, 59, 64, 74, 85, 87, 88

RNN recurrent neural network. 28

ROI region of interest. 39, 40, 43, 46, 63, 64, 67

SFB-Annotator Semantic Field Book Annotator. 11, 50, 61, 63, 65, 66, 71, 72, 74, 117, 120, 122, 148, 150

SGD Stochastic Gradient Descent. 99

SIA Smithsonian Institution Archives. 61

SNERC salient named entity recognition and classification. 11, 12, 52, 65, 78, 120, 122
Acronyms

**SPARQL**  SPARQL Protocol and RDF Query Language.  8, 34, 68, 69, 71, 72, 74, 87

**STePS**  Department of Science, Technology, and Policy Studies.  iv, 13

**SVM**  Support Vector Machine.  107, 108

**t-SNE**  t-Distributed Stochastic Neighbour Embedding.  106, 107, 115

**TDWG**  Biodiversity Information Standards.  35, 47

**TEI**  Text Encoding Initiative.  41

**TNS**  Taxonomic Name Server.  79

**URI**  Uniform Resource Identifier.  8, 21, 33, 34, 46

**URL**  Uniform Resource Locator.  8, 33

**VGG**  Visual Geometry Group.  81, 82

**VIAF**  Virtual International Authority File.  48, 59, 65

**W3C**  World Wide Web Consortium.  33, 52, 60

**XML**  Extensible Markup Language.  31, 32, 41, 42, 61

**ZICE**  Zoological Illustration and Class Embedding.  12, 92, 95, 97, 98, 106, 115

**ZSL** zero-shot learning.  6, 12, 25, 28, 29, 91, 92, 93, 94, 95, 96, 98, 99, 105, 109, 111, 112, 114, 116, 121, 122, 151