

Parent Name	Name	Description (English)
Ids der Obereleme	Name	
	Root	
Root	Natural Language Proce	Natural Language Processing includes all procedures for dealing with spoken and written human language. This includes, for example, the analysis of requirement
Root	Modeling Languages	Modeling Languages deal with formal models. In the context of engineering, such models are in particular diagrams of modeling languages ??such as UML or
Root	Knowledge Discovery	Knowledge Discovery includes activities of knowledge discovery and representation. This includes the discovery of knowledge in large databases using methods of data mining; but also the handling of structured knowledge, for example in the form of knowledge graphs. Knowledge Discovery mainly
Root	Decision Support	Decision Support deals with methods of decision-making support. This includes, for example, the case-based reasoning or support for decision-making under
Root	Signal Processing	Signal Processing covers the handling of signal data. Included here are all applications of time series as well as sensor data in general, such as vibration or temperature data. Mainly methods of supervised learning are included here, e.g., for predictions on tabular data. Methods of image processing can be found in the area "Computer Vision". Methods for
Root	Computer Vision	The field of "Computer Vision" comprises the handling of image and video data. Typical tasks are, for example, the recognition and localization of objects in
Signal Processing	Signal Cleaning	This area deals with the preparation of data so that it can be processed better. Examples are normalization, outlier detection and noise reduction.
Signal Processing	Signal Data Managemen	Signal Data Management includes data management in general (including efficient data storage, data
Signal Processing	Signal Visualization	This category includes data visualization methods to visually display as much information of complex signals as possible. E.g., scatter plots, radar charts or
Signal Processing	Trend Detection	This category deals with the detection of patterns in
Signal Processing	Signal Characterization	Signal Characterization refers to the representation of signals in different forms, such as in the frequency
Signal Processing	Classification	Classification refers to the prediction of categorical
Signal Processing	Regression	Regression refers to the prediction of real-valued
Signal Processing	Optimization	This category deals with optimization problems, especially linear programming, convex problems, non -
Signal Processing	Prediction in Time	This category includes methods for time series prediction, i.e., the prediction of a signal into the
Decision Support	Case-Based Reasoning	This category deals with problem-solving strategies based on analogies, where similar solutions are proposed for similar problems, adapted and filed for

Decision Support	Common-Sense Reasoning	Common-Sense Reasoning includes activities of reasoning on the basis of "common sense". It simulates the human ability to make assumptions about the nature of common situations based on
Decision Support	Decision Making under	This category deals with the decision to make a decision in the presence of uncertainty. In particular, it involves choosing actions based on imprecise
Knowledge Discovery	Knowledge Base	This category includes tasks of organizing structured or unstructured knowledge in knowledge bases in a
Knowledge Discovery	Data Mining	Data Mining refers to the analysis of data sets with regard to facts or events that are characteristic of
Data Mining	Dimensionality Reduction	This category includes methods for transforming data from a high-dimensional to a low-dimensional space while preserving the characteristics of the data and
Knowledge Base	Knowledge Graphs	This category includes all tasks that concern the handling of knowledge graphs. This includes, for example, the creation, completion or prediction on
Knowledge Base	Knowledge Visualization	This category includes all tasks related to the representation of complex knowledge.
Data Mining	Association Rule Learning	This category deals with learning association rules of the form $\{A,B\} \rightarrow C$, e.g., in the context of a shopping cart analysis. A possible example here would be
Data Mining	Process Mining	This category includes all activities of reconstruction and evaluation of business processes based on
Data Mining	Causal Discovery	Causal Discovery includes This includes all activities aimed at discovering cause-effect relationships.all activities to discover cause-effect contexts.
Data Mining	Clustering	This category includes activities of cluster analysis, which is used to identify similarity structures in data sets and to group objects with respect to these
Natural Language Processing	Text Mining	This category includes all methods and techniques that extract information from texts.
Natural Language Processing	Text Categorization	This category deals with the assignment of the text or text passages to certain predefined categories. Both the assignment to a single category (single-label) and the assignment to several categories (multi-label) are
Natural Language Processing	Ontology	An ontology defines the structure of an object of study. This structure is represented by concepts (e.g., entities) and their relations (links). This category is about the extraction or identification of ontologies or
Natural Language Processing	Text Generation	This category deals with the creation of text in the broadest sense. It includes everything from the creation of text within a dialog system to an information retrieval system where text is generated
Natural Language Processing	Misc	In this category of NLP, problems and processes are assigned that are not covered by the other categories.
Text Mining	Opinion Mining	This category is about analyzing opinions about an object based on natural language data such as
Text Mining	Question Answering	In this category, texts are generated that are used to answer a question within a dialog system.

Text Mining	Sentiment Analysis	This category deals with the classification of text passages regarding their affectivity and subjectivity. Style, measure and information content is taken into
Text Mining	Word Frequency Analysis	This category lists methods and techniques that are realized with the help of a statistical method - especially with reference to the frequencies of words
Text Mining	Named Entity Recognition	Named Entity Recognition (NER) refers to an important building block in text data processing that involves entity localization and classification.
Text Categorization	Summary Generation	This category refers to methods of shortening long texts. The goal is to create a coherent and smoothly readable summary that contains only the most
Text Categorization	Topic Modelling	This category includes methods for modeling the abstract topics that a document or collection of
Text Categorization	Information retrieval	Information Retrieval refers to the task of prioritizing a list of documents or search results as a result of a
Text Categorization	Text Classification	Text Classification is the task of assigning a sentence or document to an appropriate category. The categories depend on the selected dataset and span
Ontology	Taxonomy	Taxonomy learning is the task of hierarchically systematizing concepts in an automatic way from text
Ontology	Natural Language Based	NLP-based Reasoning includes the procedures that find an answer (e.g., via a logical chain of inference) to questions that have not been seen before.
Ontology	Concept Tagging	In this category, word sequences are assigned sense labels (e.g., entity IDs) from a domain ontology.
Ontology	Relation Extraction	In this category, connections between concepts (entities) are extracted using textual descriptions of
Ontology	Common-Sense Reasoning	Common-Sense Reasoning includes activities of reasoning based on "common sense".
Ontology	Semantic Role Labeling	This category deals with the assignment of labels to words or phrases of a sentence with respect to their semantic role, such as actor, target or result.
Ontology	Semantic Parsing	This category is concerned with the transformation of a natural language statement into a logical, machine-understandable form while preserving the exact
Ontology	Entity Linking	In this category, the mappings between two concepts of an ontology (e.g., entities) within a given text are
Text Generation	Speech Recognition	This category is about methods for recognizing spoken
Text Generation	Machine Translation	Machine Translation deals with the automatic, computer-assisted translation of texts from one
Text Generation	Goal Oriented Dialog	This category involves special dialog systems that recommend an action to a questioner in order to
Text Generation	Speech Generation	This category is about methods for generating spoken
Misc	Natural Language Inference	This category is about deducing, given a premise, whether a statement (hypothesis) is true, false, or
Misc	Semantic Textual Similarity	This category is about assessing the similarity of texts in terms of their content meaning.
Misc	Event Extraction	This category includes methods for extracting events from natural language texts.

Computer Vision	Image Categorization	Images are assigned to defined categories.
Computer Vision	Image Enhancement	Image enhancement is the process of adjusting digital images so that the results are more suitable for display or further image analysis. For example, noise can be removed or an image can be brightened so
Computer Vision	Image Manipulation	This category includes activities for modifying images.
Computer Vision	Image Creation	This category includes all activities to create a digital image, e.g., of a new product.
Computer Vision	Information Reduction	This category deals with the transformation of data from a high-dimensional space to a low-dimensional space so that the low-dimensional representation retains some meaningful properties of the original
Computer Vision	Visual Information Extr	This category refers to the extraction of visual information from an image.
image Categorizat	Image classification	This category deals with capturing an entire image, which is then assigned to a specific category.
image Categorizat	Image Retrieval	This category is about browsing, searching and retrieving images from a large database of digital
Image Enhanceme	Denoising	This category refers to noise reduction or suppression
Image Enhanceme	Image Reconstruction	This category deals with the reconstruction of 2D and 3D images in certain imaging techniques. For example, in computed tomography, an image must be
Image Enhanceme	Image Restoration	This category is about converting damaged input images into near-flawless images.
Image Enhanceme	Image Super-Resolution	This category refers to the reconstruction of a higher resolution image from a lower resolution input image.
Image Enhanceme	Image Quality Assessm	This category contains methods for evaluating image
Image Enhanceme	Deblurring	This category includes all methods for removing blur artifacts from images.
Image Enhanceme	Image Compression	Image Compression is a type of data compression applied to digital images to reduce their cost of
Image Enhanceme	Dehazing	This category deals with the removal of haze or fog from images caused by dust, smoke, or other particles in the air that reduce visibility.
Image Manipulatio	Image Style Transfer	This category is about transferring styles to images, such as artificial artwork from photographs, by transferring the look of famous paintings to
Image Manipulatio	Image Colorization	This category includes all activities related to adding plausible color information to monochrome images.
Image Manipulatio	Image Synthesis	Image Synthesis is the process of creating new computer generated images from an image
Image Manipulatio	Image Inpainting	This category refers to the reconstruction of missing or destroyed regions in an image.
Image Creation	3D Reconstruction	This category includes activities to create three-dimensional models from a set of images.
Image Creation	Image Generation	Image Generation is the task of creating new images from an existing data set.
Image Enhanceme	Image Registration	This category includes methods that match two or more images of the same scene, or at least of similar

Image Creation	Data Augmentation	Data Augmentation is the process of increasing the amount of data by adding slightly modified copies of existing images or newly created synthetic images
Information Reduc	Quantization	This category refers to lossy compression techniques in which a range of values is compressed to a single
Information Reduc	Image Cropping	This category deals with cropping image edges to fit the image format to another format without creating black borders or distorting the image.
Visual Information	Object Detection	This category contains methods for detecting one or more objects in an image.
Visual Information	Image Captioning	This category includes methods for automatically generating metadata of an image, such as subtitles or
Visual Information	Semantic Segmentation	This category refers to grouping parts of an image that belong to the same object class.
Visual Information	Object Recognition	This category refers to the recognition and classification of objects in images.
Visual Information	Visual Relationship Rec	This category deals with the recognition of relationships of objects in an image, e.g., a person
Visual Information	Object Tracking	Object Tracking is the tracking of objects in a
Visual Information	Trajectory Prediction	This category deals with trajectory prediction of spatial coordinates of moving objects such as cars or
Visual Information	Pose Estimation	This category is about detecting the position and orientation of an object.
Visual Information	Activity Recognition	Activity Recognition involves the detection of (human) activity to identify events performed by humans.
Visual Information	Depth Estimation	This category handles depth estimation from 2D images to predict the depth value of each pixel when only a single image is available as input.
Visual Information	Anomaly Detection	Anomaly Detection refers to the detection of errors in images or of incorrect images in image series.
Visual Information	Optical Character Reco	Optical Character Recognition is automated text recognition or automatic character recognition within
Modeling Language	Text-to-Model Transfor	This category contains methods for creating formal models based on textual descriptions.
Modeling Language	Model-to-Text Transfor	This category includes methods for converting formal models into text, e.g., code generation.
Modeling Language	Model-to-Model Transf	This category covers methods for the conversion of formal models. Important examples are the conversion of platform-independent into platform-specific models or the translation between different
Signal Processing	Feature Engineering for	This category refers to the generation of features, i.e., from the raw signal to the feature space. It also includes, for example, feature selection procedures
Natural Language	Feature Engineering for	This category deals with feature extraction and construction for NLP activities.
Computer Vision	Feature Engineering for	This category deals with feature extraction and construction for computer vision activities.
Data Mining	Outlier Detection	Outlier Detection includes methods for detecting "outliers", i.e., data points that deviate significantly