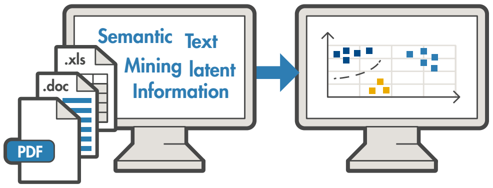
Get Started with Text Analytics Toolbox



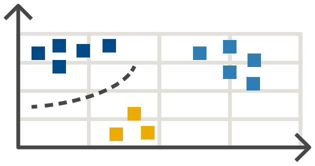
Text Analytics Toolbox™ provides algorithms and visualizations for preprocessing, analyzing, and modeling text data. Models created with the toolbox can be used in applications such as sentiment analysis, predictive maintenance, and topic modeling.

Learn more at: *mathworks.com/products/text-analytics*

Function Name	Description
`wordcloud`	Create word cloud chart from bag-of-words or LDA model
`wordCloudCounts`	Count words for word cloud creation
`textscatter`	2-D scatter plot of text
`textscatter3`	3-D scatter plot of text
`heatmap`	Create heatmap chart
`histcounts`	Histogram bin counts
`discretize`	Group data into bins or categories

Visualize

Use word clouds and text scatter plots to summarize and validate results.



Model and Predict

Convert text into numeric representations using bag-of-words or pretrained word embedding models, and apply specialized machine learning algorithms for prediction and topic modeling.

Function Name	Description
`readWordEmbedding`	Read word embedding from text file
`trainWordEmbedding`	Train word embedding
`word2vec/vec2word`	Maps words to embedding vectors
`ldaModel`	Latent Dirichlet allocation (LDA) model
`lsaModel`	Latent semantic analysis (LSA) model
`bagOfWords`	Bag-of-words model
`fitlda`	Fit latent Dirichlet allocation (LDA) model
`fitlsa`	Fit a latent semantic analysis (LSA) model
`predict`	Predict top LDA topics of documents
`fitdist`	Fit probability distribution object to data
`fitrlinear`	Fit linear regression model to high-dimensional data
`fitclinear`	Fit linear classification model to high-dimensional data
`fitcecoc`	Fit multiclass models for classifiers

Function Name	Description
`extractFileText`	Read from PDF, Microsoft Word, and plain text
`textscan`	Read formatted data from text file or string
`readtable`	Create table from file
`compose`	Convert data into formatted string array
`xlsread`	Read Microsoft Excel spreadsheet file
`webread`	Read content from RESTful web service
`TabularTextDatastore`	Datastore for tabular text files
`FileDatastore`	Datastore with custom file reader
`SpreadsheetDatastore`	Datastore for spreadsheet files

Import

Extract text from Microsoft® Word® files, PDFs, text files, and spreadsheets.

~~"~~Performe~~d~~ preventive maintenance servicei~~ng~~ ~~on a~~ broke~~n~~ pump~~."~~

Preprocess

Remove less helpful artifacts such as common words, punctuation, and URLs and apply text normalization to stem words to their root word.

Function Name	Description
`tokenizedDocument`	Split documents into collections of words
`normalizeWords`	Remove inflections from words using the Porter stemmer
`bagOfWords`	Bag-of-words model
`stopWords`	Stop word list
`context`	Search documents for word occurrences in context
`removeWords`	Remove selected words from document or bag-of-words
`removeLongWords`	Remove long words from documents or bag-of-words
`removeShortWords`	Remove short words from documents or bag-of-words
`removeInfrequentWords`	Remove words with low counts from bag-of-words model
`erasePunctuation`	Erase punctuation from text and documents

Function Name	Description
`str = "Hello,world"`	Declare a string variable
`str = ["Hello", "World"]`	Declare a string array
`str = string( C )`	Convert a character vector C to a string
`str2double`	Convert a string to double numbers
`strlength`	Return the length of strings
`isstring`	Determine if input is string array
`join`	Combine strings
`split`	Split strings in string array
`splitlines`	Split string at newline characters
`replace`	Find and replace substrings in string array
`contains`	Determine if pattern is in string
`erase`	Delete substrings within strings
`extractBetween`	Extract substrings between indicators
`extractAfter`	Extract substring after specified position
`extractBefore`	Extract substring before specified position
`strcmp`	Compare strings
`regexp`	Match regular expression (case sensitive)

`"Hello,world"`

String

Manipulate, compare, and store text data efficiently.

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