	Implementation schedule	Physically/ Remotely	Contact hours	Autonomous work for students (max hours)	Learning outcomes
Activity 1	Introduction to NLP Orange Data Mining software (data import, widgets) Text preprocessing: word cloud	**remotely**	**3**	**4**	Understand basic natural language processing methods and how they can be implemented for climate research Understand Orange Data Mining software architecture and ways of importing both locally and online retrieved data Understand and implement basic methods for text preprocessing (stop words removal, lemmatization, stemming) Create representative word clouds
Activity 2	Text Representation: Bag of Words and Embeddings	**remotely**	**3**	**4**	Understand why textual data need vector representation Understand differences between Bag of Words and Embeddings representation Apply appropriate method of text vectorization for research problem

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Activity 3	Sentiment Analysis: Lexicon-Based and Supervised	**remotely**	**3**	**4**	Understand differences between methods available for sentiment analysis Apply appropriate method of sentiment analysis for research problem
Activity 4	Topic Modeling: LDA and BERT-Based	**remotely**	**3**	**4**	Understand differences between methods available for topic modeling Apply appropriate method of topic modeling for research problem Critically interpret and evaluate results of topic modeling
Activity 5	Group research under supervision: implementation of NLP methods on dataset dealing with topic of climate	**remotely**	**6**	**12**	Teamwork, international collaboration, communicate in English
Activity 6	Group presentations	**remotely**	**2**	**2**	Presentation skills, communicate in English
Total Hours			**20**	**30**	**50**

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