

Subject card

Subject name and code	Data Analytics Interactive - Lectures, PG_00188672						
Field of study	English Studies						
Date of commencement of studies	October 2027		Academic year of realisation of subject		2028/2029		
Education level	Master's studies		Subject group		Obligatory subject group in the field of study Optional subject group Subject group related to scientific research in the field of study		
Mode of study	full-time studies		Mode of delivery		at the university		
Year of study	2		Language of instruction		Polish		
Semester of study	3		ECTS credits		1.0		
Learning profile	academic		Assessment form		credit		
Conducting unit							
Name and surname of lecturer (lecturers)	Subject supervisor		mgr Dagmara Solska				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	0.0	0.0	0.0	15
	E-learning hours included: 0.0						
Learning activity and number of study hours	Learning activity	Participation in didactic classes included in study plan		Participation in consultation hours		Self-study	SUM
	Number of study hours	15		1.0		9.0	25
Subject objectives	The aim of the course is to develop students critical understanding of methods used in linguistic data analytics, to evaluate the quality of different data sources, and to interpret the results of quantitative and qualitative analyses in linguistic research based on textual data analysis. The class focuses on discussing methodological approaches, reflecting on data representativeness and ethics, and examining selected case studies in text analytics, corpus linguistics, computational linguistics, and natural language processing.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[FAMU2_W14] Knows and understands selected issues connected to various disciplines constituting auxiliary and related sciences of English Philology, necessary as a context for research in the field of English linguistics and English-language literatures or in the professional activity of the English philologist.	Understands fundamental dilemmas of contemporary civilisation in relation to intercultural linguistic and literary communication and the role of modern technologies in philological work, particularly in the context of linguistic data analytics, corpus linguistics, computational linguistics, and natural language processing.	[SW2] presentation/project/paper/report
	[FAMU2_U04] Can select and apply information and communication techniques (ICT) during the acquisition and processing of information for research and professional purposes within the framework of English Studies.	Is able to select and apply information and communication technologies (ICT) when acquiring and processing textual data in the context of linguistic data analytics within English philology.	[SU2] presentation/project/paper/report
	[FAMU2_U05] Can use and present orally and in writing knowledge in the field of auxiliary and related sciences, which is a context for English linguistic and literary studies and supports the professional work of an English philologist.	Is able to use and present, both orally and in writing, knowledge arising from the analysis of textual data and from complementary disciplines that contextualise linguistic and literary research.	[SU1] oral statement/conversation/discussion
	[FAMU2_W12] Knows and understands the main development trends in literature, in particular with regard to research into English-language literature.	Understands selected issues within complementary and related disciplines of English studies that are relevant to textual data analytics and provide context for linguistic and literary research.	[SW2] presentation/project/paper/report
	[FAMU2_U10] Can independently plan and implement their own lifelong learning and guide others in this area within the framework of English philology and their chosen field of professional activity.	Is able to independently plan and carry out processes involving the acquisition and analysis of linguistic data, and to develop competencies related to textual data analytics in English philology.	[SU2] presentation/project/paper/report
	[FAMU2_U02] Can apply knowledge in the field of linguistics and literature in solving practical problems in the field of the chosen specialty.	Is able to apply knowledge from linguistics and literary studies to solving practical research problems based on textual data analysis within the chosen specialisation.	[SU2] presentation/project/paper/report
	[FAMU2_K02] Is prepared to recognise the importance of knowledge and skills in English Studies in solving cognitive and practical problems and to seek the advice of a supervisor in their chosen place of work in the event of difficulty in solving problems on their own.	Is prepared to acknowledge the importance of knowledge and skills related to textual data analytics in addressing cognitive and practical problems, and to seek expert guidance when difficulties arise in independent problem-solving.	[SK2] presentation/project/paper/report

Subject contents	1. Wprowadzenie do analityki danych językowych w badaniach filologicznych Zakres zastosowań danych tekstowych w językoznawstwie; rola danych w nowoczesnych badaniach nad językiem angielskim; dyskusja o relacji między metodami jakościowymi i ilościowymi. 2. Źródła danych językowych i ich charakterystyka Rodzaje źródeł danych tekstowych (literatura, media, internet, dialogi, korpusy); ograniczenia i wyzwania; etyka pozyskiwania danych. 3. Reprezentatywność i jakość danych tekstowych Problemy doboru próby; stronniczość danych (bias); wiarygodność danych cyfrowych; krytyczna analiza konkretnych przykładów zbiorów danych. 4. Konceptcje i podstawowe procedury analizy danych tekstowych Kluczowe etapy przygotowania danych (preprocessing - omówienie koncepcyjne); znaczenie segmentacji, tokenizacji, anotacji; praktyczne konsekwencje decyzji metodologicznych. 5. Metody ilościowe w analizie danych językowych ujęcie dyskusyjne Częstości, współwystępowania, rozkłady; jak interpretować (i jak NIE interpretować) wyników ilościowych w badaniach językoznawczych. 6. Metody jakościowe i ich relacja do danych tekstowych Analiza kontekstowa, interpretacja w świetle teorii językoznawczej i literaturoznawczej; modele interpretacyjne oparte na danych. 7. Studia przypadku (case studies) z analityki tekstu Przegląd badań wykorzystujących dane tekstowe: dobór metod, krytyka, interpretacja wyników; dyskusja nad przykładami z językoznawstwa korpusowego, komputerowego i humanistyki cyfrowej. 8. Wizualizacja danych i narracja oparta na danych Jak przedstawiać wyniki analiz w humanistyce; omówienie przykładów wizualizacji; typowe błędy interpretacyjne. 9. Dyskusja nad aktualnymi trendami w analityce danych językowych Upowszechnienie modeli NLP; wpływ dużych zbiorów danych na badania humanistyczne; krytyczna refleksja nad rolą technologii w filologii.		
Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	student project	51.0%	80.0%
	discussion activity	0.0%	20.0%
Recommended reading	Basic literature	<i>Understand Data Science, Statistics, and Machine Learning</i> . Wiley. Wilke, Claus O. (2019). <i>Fundamentals of Data Visualization: A Primer on Making Informative and Compelling Figures</i> . O'Reilly Media. Lewandowska-Tomaszczyk, Barbara (2005). <i>Foundations of Corpus Linguistics</i> . University of Łódź Press.	

	Supplementary literature	Pawłowski, Adam (ed.) (2023). <i>From Gutenberg to Zuckerberg: An Introduction to Digital Humanities</i>. Universitas. Downey, Allen B. (2023/2025). <i>Think Stats: Exploratory Data Analysis in Python</i>. O'Reilly Media.
	eResources addresses	
Example issues/ example questions/ tasks being completed	1. What criteria make textual data representative for linguistic research? 2. Discuss potential sources of bias in linguistic datasets and their implications. 3. What are the advantages and limitations of using large textual datasets in the humanities? 4. How do methodological decisions (e.g., tokenisation, annotation, sampling) affect research outcomes? 5. Analyse a selected case study: what data were used, what methods applied, what limitations identified? 6. What ethical issues arise in collecting data from social media platforms? 7. How can quantitative results be interpreted without overgeneralising? 8. Compare two approaches to textual data analysis (e.g., corpus-based vs. qualitative). 9. How can the reliability of NLP-generated results be evaluated?	
Work placement	Not applicable	

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