Schedule

Github repository:https://github.com/anasan00/sds_komex
Lectures: 26 Feb - 1 Mar, C427 9 AM – 12:30 PM
Supervised learning: 1:30 PM – 2:30 PM
Office Hours: 2:45-3:45 PM

Monday, 26.02. Search Data and Google Flu Trends		Notebook
9:00-9:15	*Welcome & Overview* Introduction + logistics	-
09:15-10:00	Lecture: Introduction to Social Data Science and the case of search data and Google Flu trends	
10:00-10:30	Tutorial: Introduction to Data Processing with Pandas	1.1
10:30:11:00	*Break*	
11:00-12:30	Tutorial: Using Google Trends data in Python	1.2
12:30-13:30	*Lunch*	
13:30-14:30	Supervised Learning: Testing the relationship between future orientation and GDP with Google Trends and World Bank API	Ex 1
Tuesday, 27.02. Social Impact		
09:00-10:30	Lecture: Social Impact in online media with Regression and bootstrapping	
10:30:11:00	*Break*	
11:00-12:30	Tutorial: Reddit API, loading and dumping JSON, and linear regression basics in Python	2.1
12:30-13:30	*Lunch*	
13:30-14:30	Supervised Learning: Testing the division of impact hypothesis on Reddit	Ex 2
Wednesday, 28.02. Computational Affective Science and NLP		
09:00-10:30	Lecture: Computational Affective Science: supervised and unsupervised sentiment analysis	
10:30:11:00	*Break*	
11:00-12:30	Tutorial: Off-the-self sentiment analysis (VADER and BERT) and supervised analysis with scikit-learn.	3.1
12:30-13:30	*Lunch*	

13:30-14:30	Supervised Learning: Evaluation of sentiment analysis methods	Ex 3
Thursday, 29.02. Social Networks Part 1		
09:00-10:30	Lecture: Online Social networks: concepts and node-level analysis	
10:30:11:00	*Break*	
11:00-12:30	Tutorial: Handling network data with NetworkX	4.1
12:30-13:30	*Lunch*	
13:30-14:30	Supervised Learning: Reading and visualizing Swiss politicians on Twitter	Ex 4
Friday, 01.03. Social Networks Part 2		
09:00-10:30	Lecture: Network-level metrics and analysis - Social resilience and communities	
10:30:11:00	*Break*	
11:00-12:30	Tutorial: Network analysis with NetworkX and advanced visualization with Gephi	5.1
12:30-13:30	*Lunch*	
13:30-14:30	Supervised Learning: Politician assortativity on Twitter + community detection	Ex 5

Recommended readings for the course

1. Li, F., Zhou, Y., & Cai, T. (2021). Trails of data: Three cases for collecting web information for social science research. Social Science Computer Review, 39(5), 922-942. doi:10.1177/0894439319886019
2. Nyhuis, D. (2021). Application programming interfaces and web data for social research. In Handbook of Computational Social Science, Volume 2. Routledge. doi:10.4324/9781003025245-4
3. Hovy, Dirk. *Text analysis in Python for social scientists: Discovery and exploration*. Cambridge University Press, 2020.