



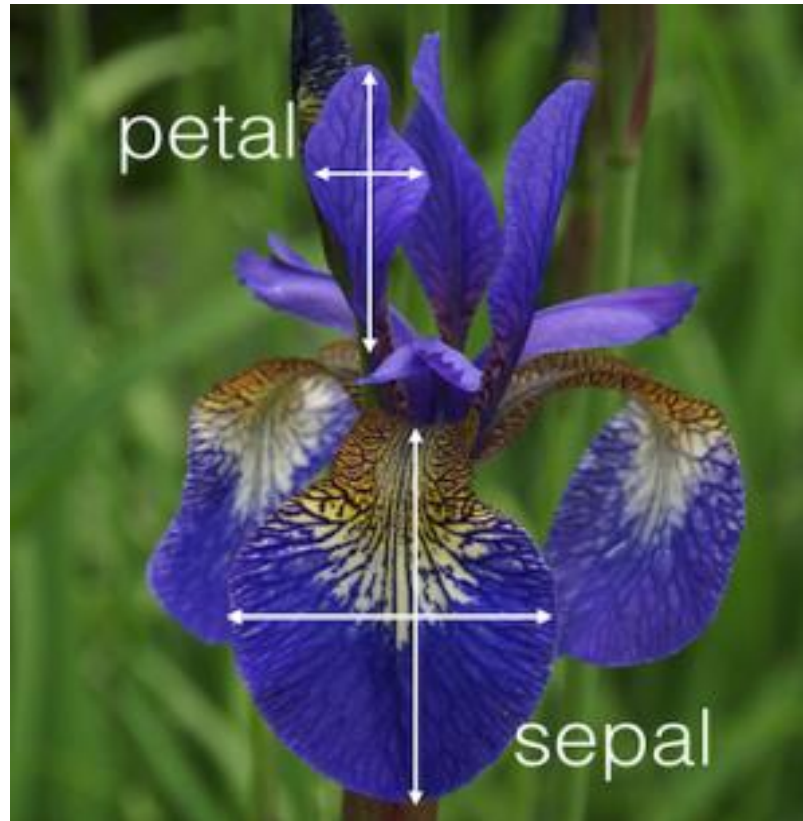
With the support of the
Erasmus+ Programme
of the European Union

INFORMATIKA 2023

VYUŽITÍ DAT DATABÁZE EUROSTAT A URBAN ATLAS VE VÝUCE PŘEDMĚTU DATA MINING

doc. Ing. Zdena DOBEŠOVÁ, Ph.D.







eurostat

Data Browser

ALL DATA

-  General and regional statistics
-  Economy and finance
-  Population and social conditions
-  Industry, trade and services
-  Agriculture, forestry and fisheries
-  International trade in goods
-  Transport
-  Environment and energy
-  Science, technology, digital society
-  Tables on EU policy
-  Cross cutting topics



ALL DATA

Info

Sort category date

	Transport	
	+ Multimodal data	45
	- Railway transport	153
	- Railway transport infrastructure	7
	- Railway transport equipment	10
	- Railway transport - enterprises, economic performances and employment	4
	- <u>Railway transport measurement - passengers</u>	10
	+ Railway transport measurement - goods	24
	+ Railway traffic	95
	- Railway transport - Accidents - Historical data (2004-2015)	3
	+ Road transport	126
	+ Inland waterways transport	34
	+ Oil pipeline transport	7
	+ Maritime transport	135

Railway transport > Railway transport measurement - passengers

	Passengers transported	
	[RAIL_PA_TOTAL] [16/11/2021 23:00]	
	Passengers transported (detailed reporting only) - (quarterly data)	
	[RAIL_PA_QUARTAL] [21/09/2021 23:00]	
	Passenger transport by type of transport (detailed reporting only)	
	[- 1 derived table] [RAIL_PA_TYPEPAS] [16/11/2021 23:00]	
Derived tables		
	Rail transport of passengers [TTR00015]	
	International transport of passengers from the reporting country to the country of disembarkation	
	[RAIL_PA_INTGONG] [16/11/2021 23:00]	
	International transport of passengers from the country of embarkation to the reporting country	
	[RAIL_PA_INTCMNG] [16/11/2021 23:00]	
	Railway transport - national and international railway passengers transport by loading/unloading NUTS 2 region	
	[TRAN_R_RAPA] [21/09/2021 23:00]	
	Passengers by speed of train	
	[RAIL_PA_SPEED] [29/04/2021 23:00]	
	Passenger cars in accompanied passenger car railway transport, by type of transport	

You are here: Home / Local / Urban Atlas / Urban Atlas 2018

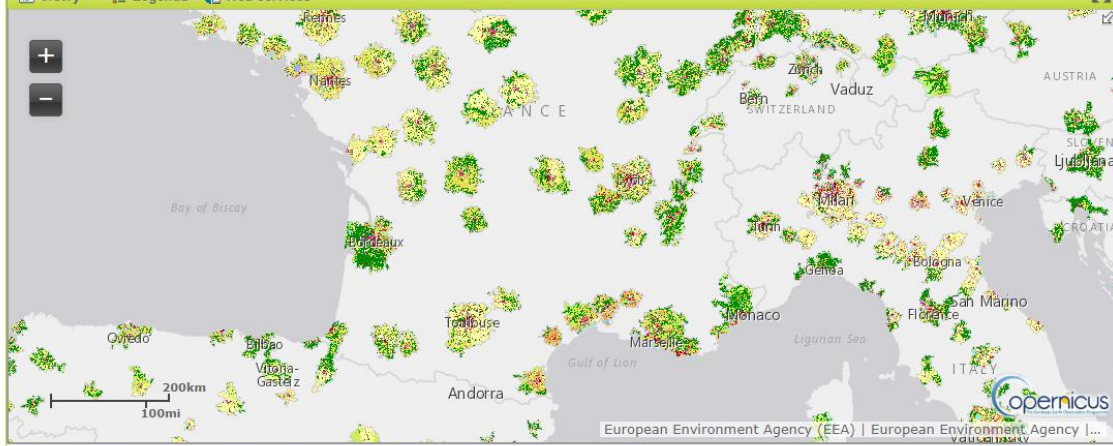
Urban Atlas 2018

Print

Partially validated

Map View Metadata Download

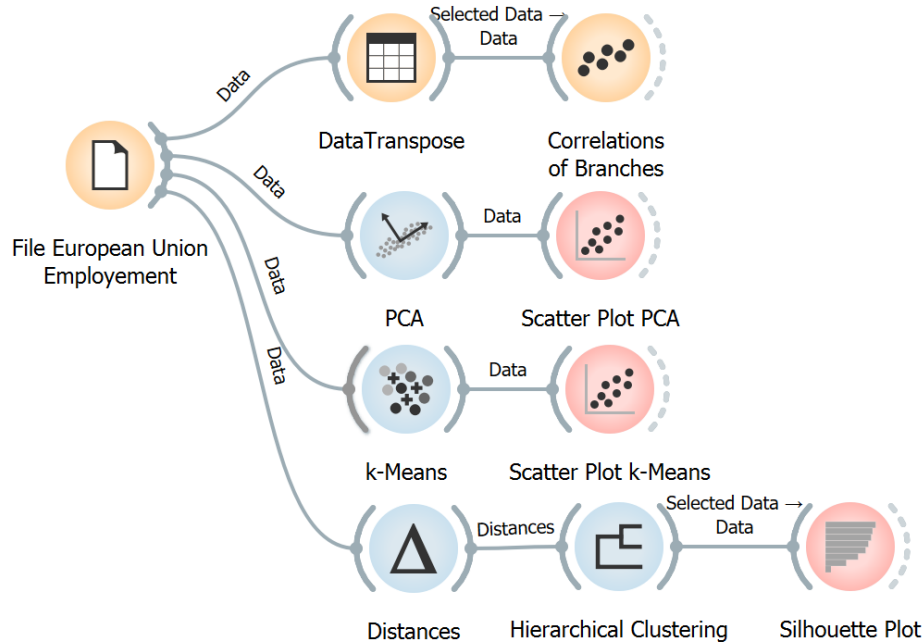
Vrstvy Legendu Web services



User corner

- How to access our data
- Technical library
- Factsheets
- Use cases
- Looking for National projection & Expert products?

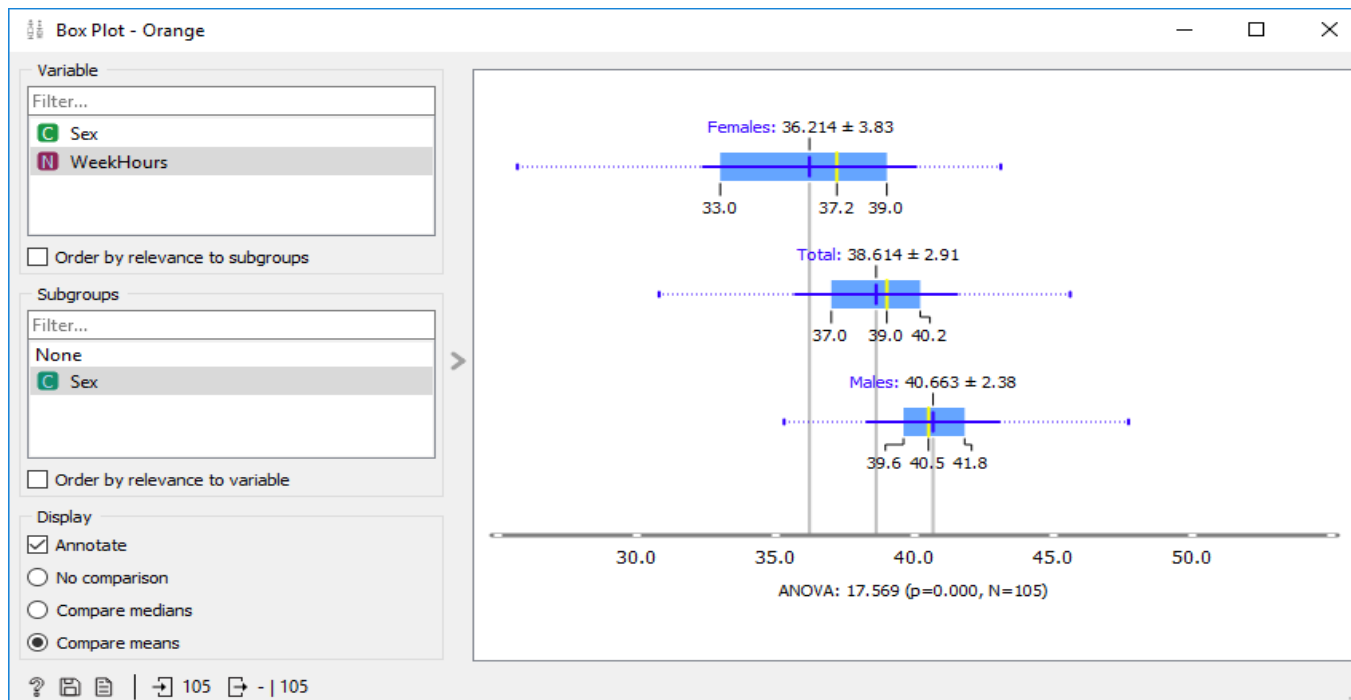
SW ORANGE



Dobešová Z. (2022) **ORANGE, Praktický návod do cvičení předmětu Data Mining**. Univerzita Palackého v Olomouci, 119 s. ISBN 978-80-244-6086-4, DOI: 10.5507/prf.22.2440864

ZDARMA KE STAŽENÍ

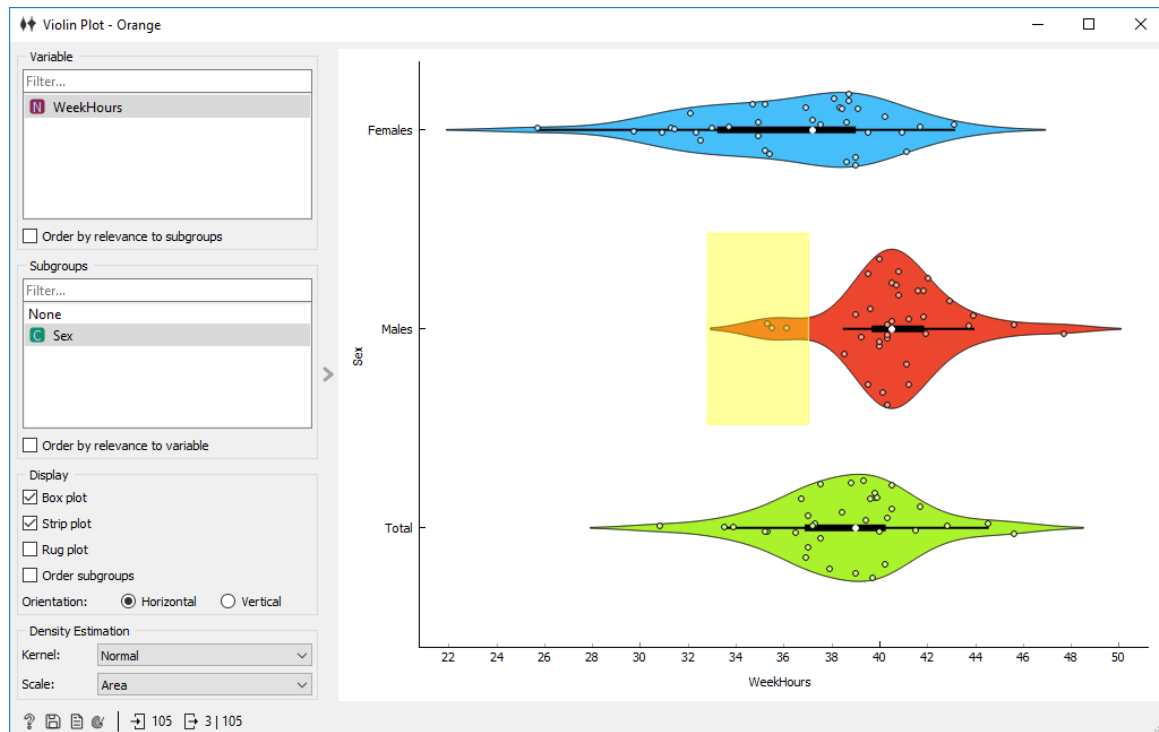
Počet pracovních hodin v týdnu podle pohlaví



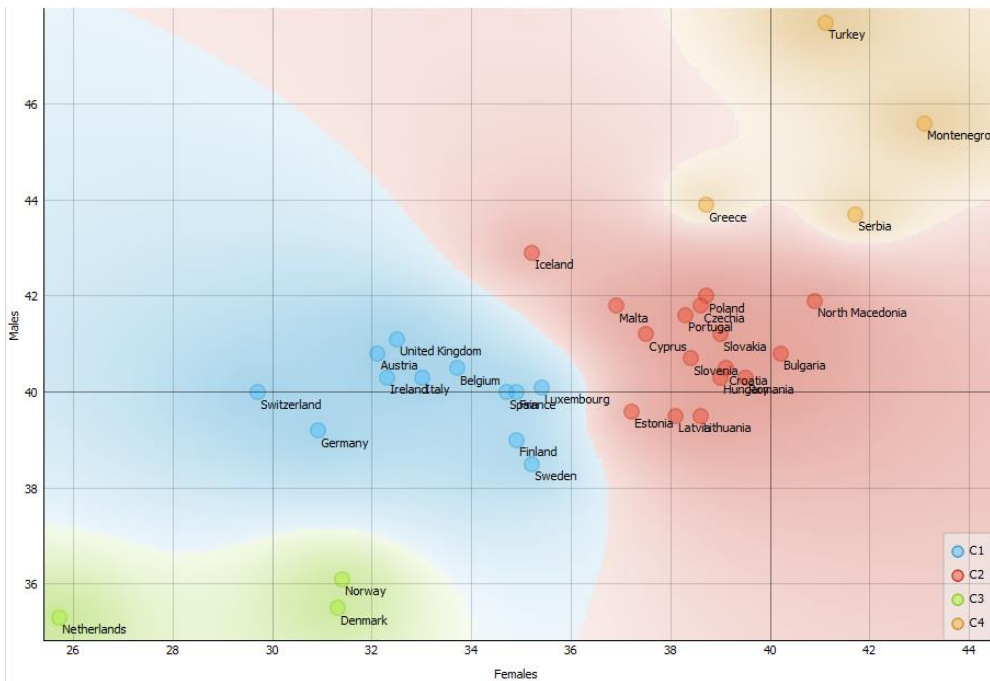
kód dat
LFSA_EWHUN2

Počet pracovních hodin v týdnu podle pohlaví

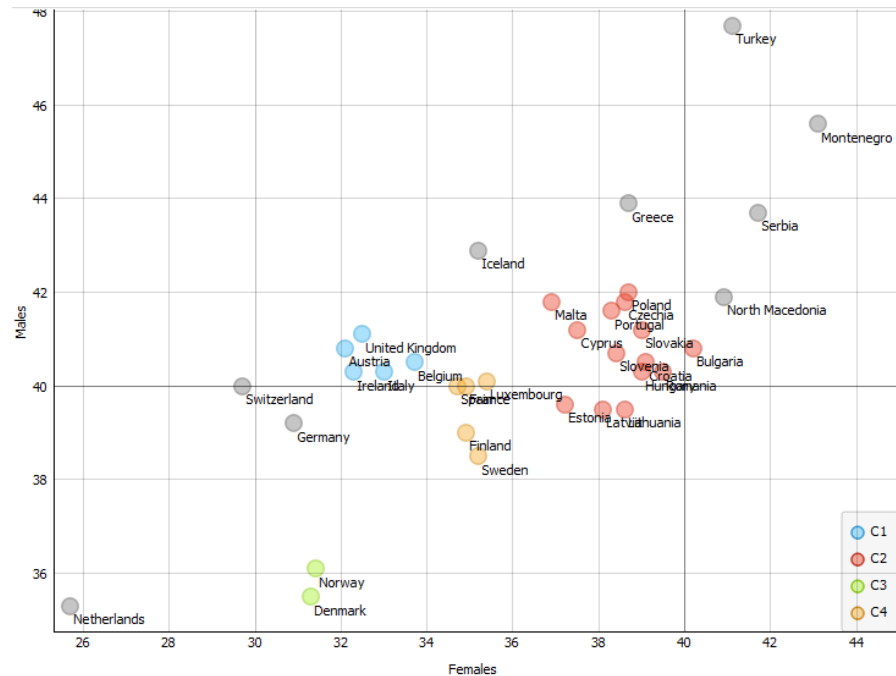
výskytový graf
scatter plot
houslový graf
violin plot



Shlukování k-Means



DBSCAN

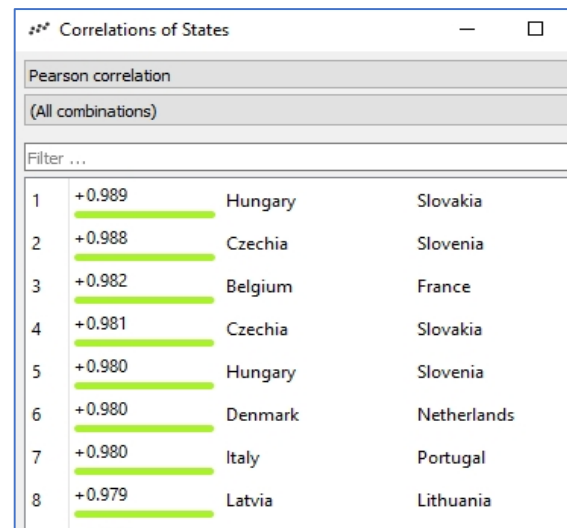
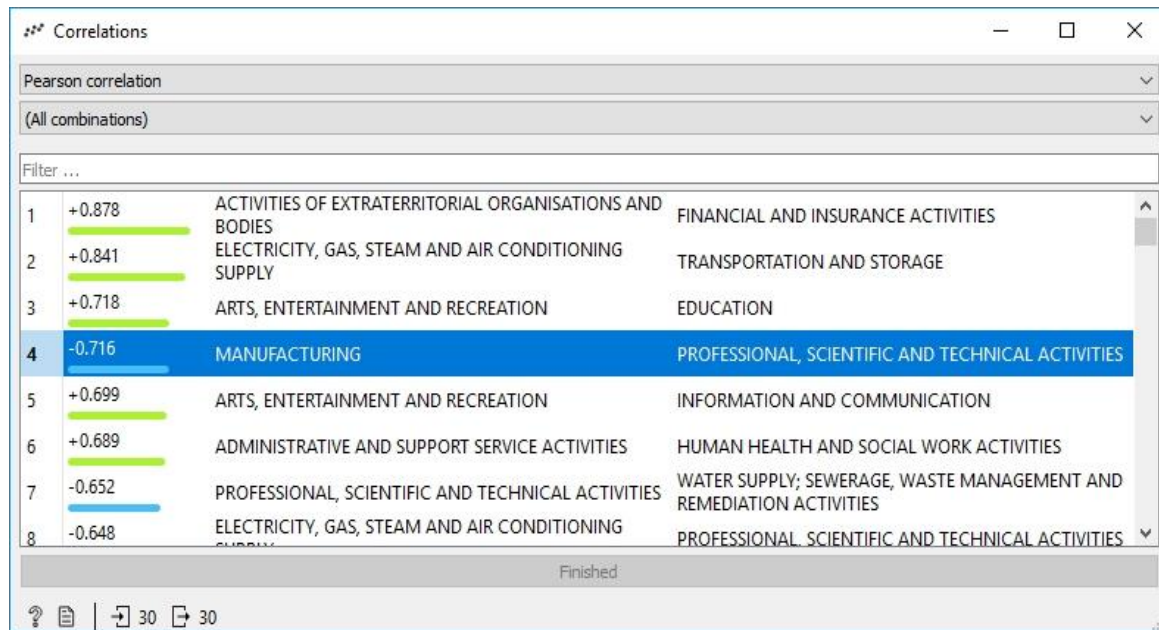


NACE *National accounts employment data by industry*



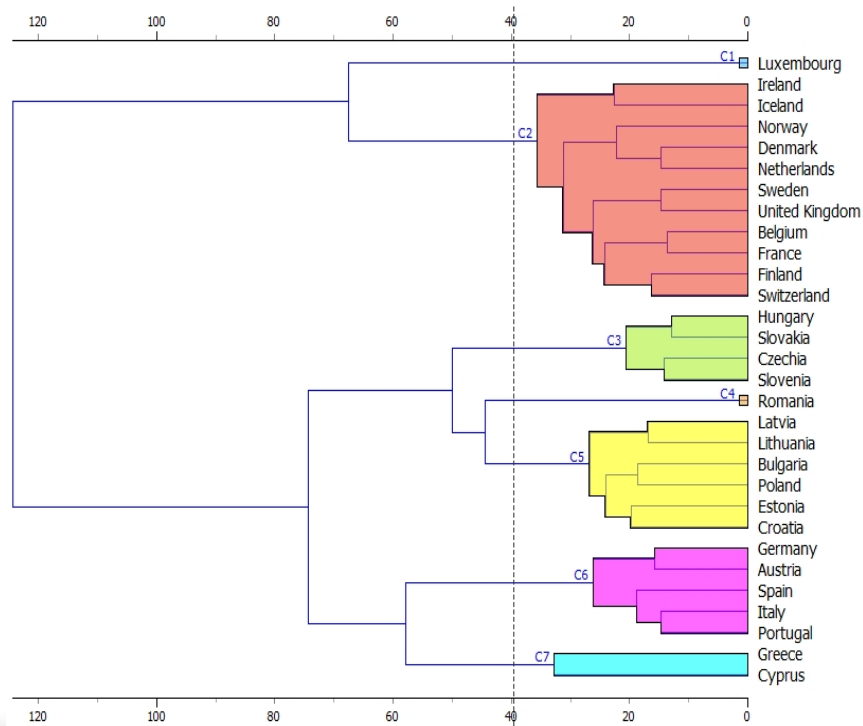
Code	Description
A	AGRICULTURE, FORESTRY AND FISHING
B	MINING AND QUARRYING
C	MANUFACTURING
D	ELECTRICITY, GAS, STEAM AND AIR CONDITIONING SUPPLY
E	WATER SUPPLY; SEWERAGE, WASTE MANAGEMENT AND REMEDIATION ACTIVITIES
F	CONSTRUCTION
G	WHOLESALE AND RETAIL TRADE; REPAIR OF MOTOR VEHICLES AND MOTORCYCLES
H	TRANSPORTATION AND STORAGE
I	ACCOMMODATION AND FOOD SERVICE ACTIVITIES
J	INFORMATION AND COMMUNICATION
K	FINANCIAL AND INSURANCE ACTIVITIES
L	REAL ESTATE ACTIVITIES
M	PROFESSIONAL, SCIENTIFIC AND TECHNICAL ACTIVITIES
N	ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES
O	PUBLIC ADMINISTRATION AND DEFENCE; COMPULSORY SOCIAL SECURITY
P	EDUCATION
Q	HUMAN HEALTH AND SOCIAL WORK ACTIVITIES
R	ARTS, ENTERTAINMENT AND RECREATION
S	OTHER SERVICE ACTIVITIES
T	ACTIVITIES OF HOUSEHOLDS AS EMPLOYERS; UNDIFFERENTIATED GOODS- AND SERVICES-PRODUCING ACTIVITIES OF HOUSEHOLDS FOR OWN USE
U	ACTIVITIES OF EXTRATERRITORIAL ORGANISATIONS AND BODIES

Korelace

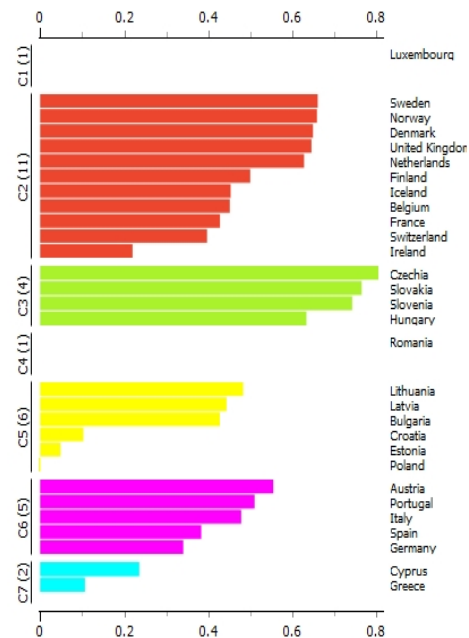


Zaměstnanost podle odvětví

shluky států

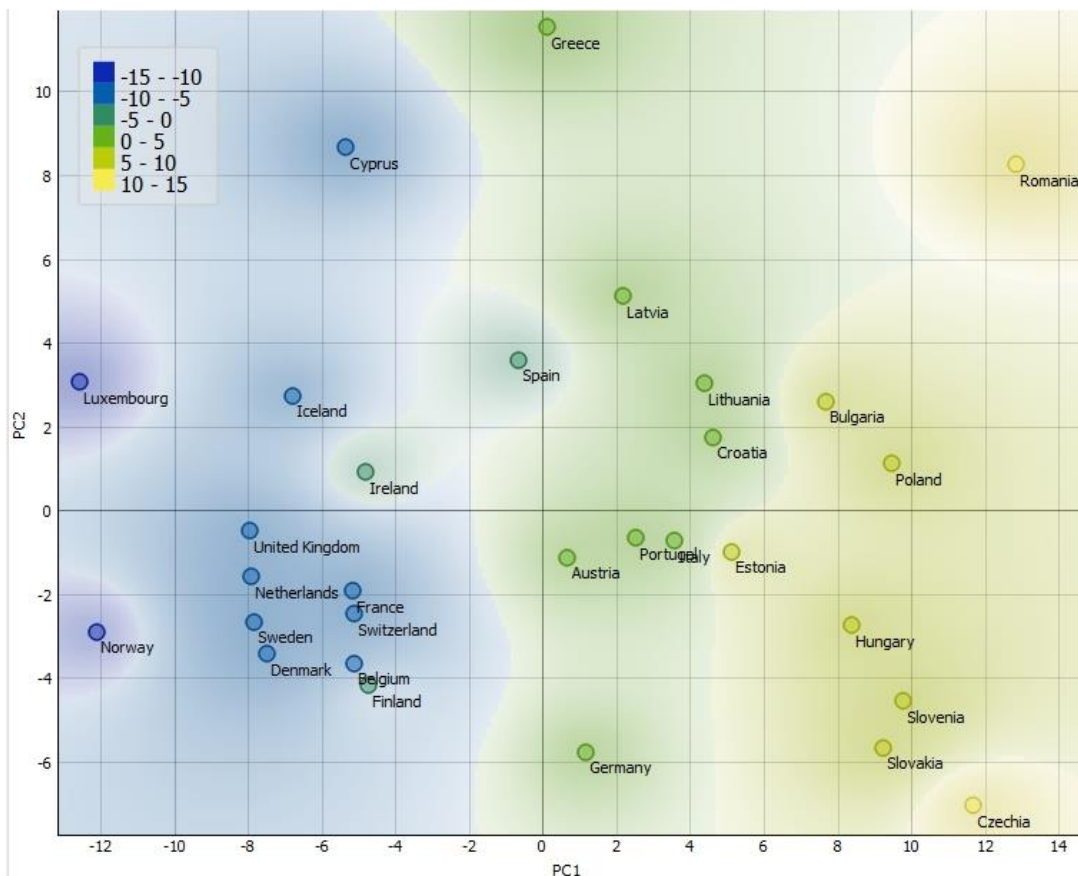


graf siluety

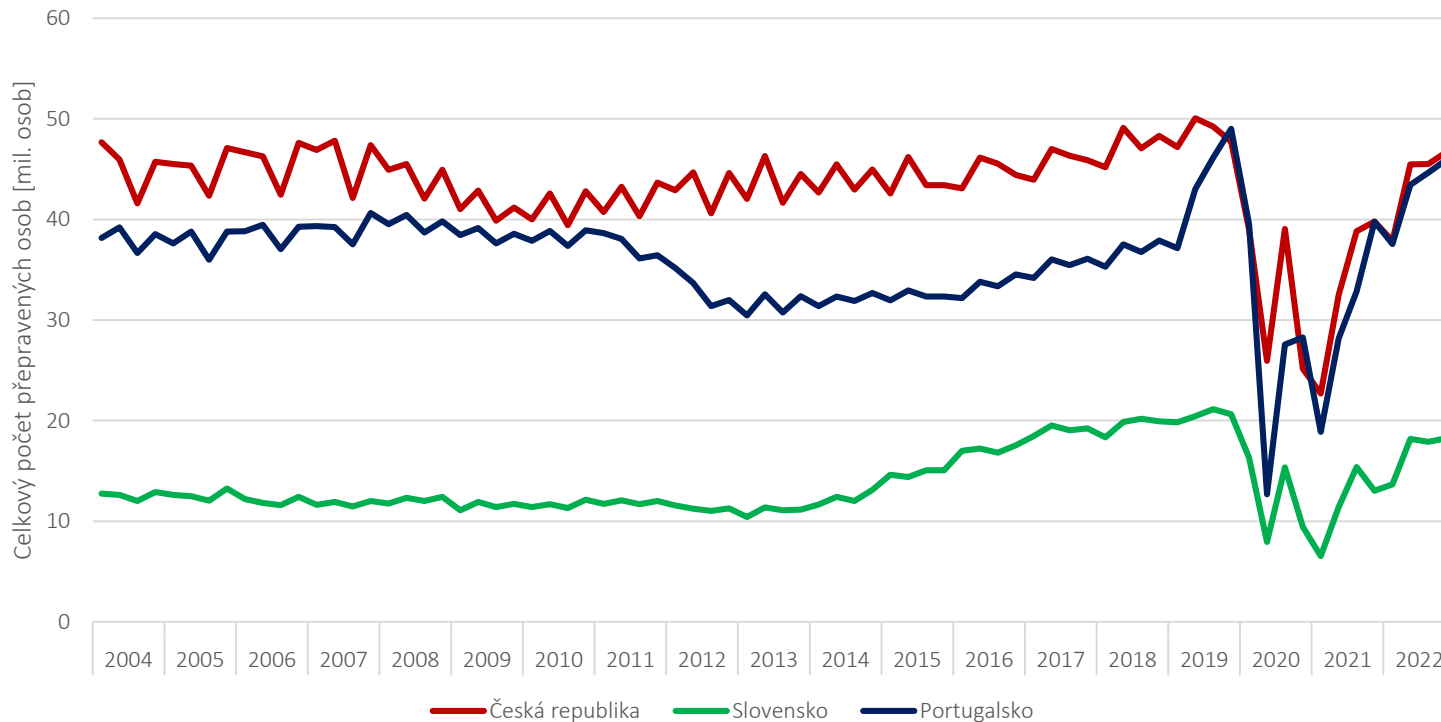


PCA

intepretace

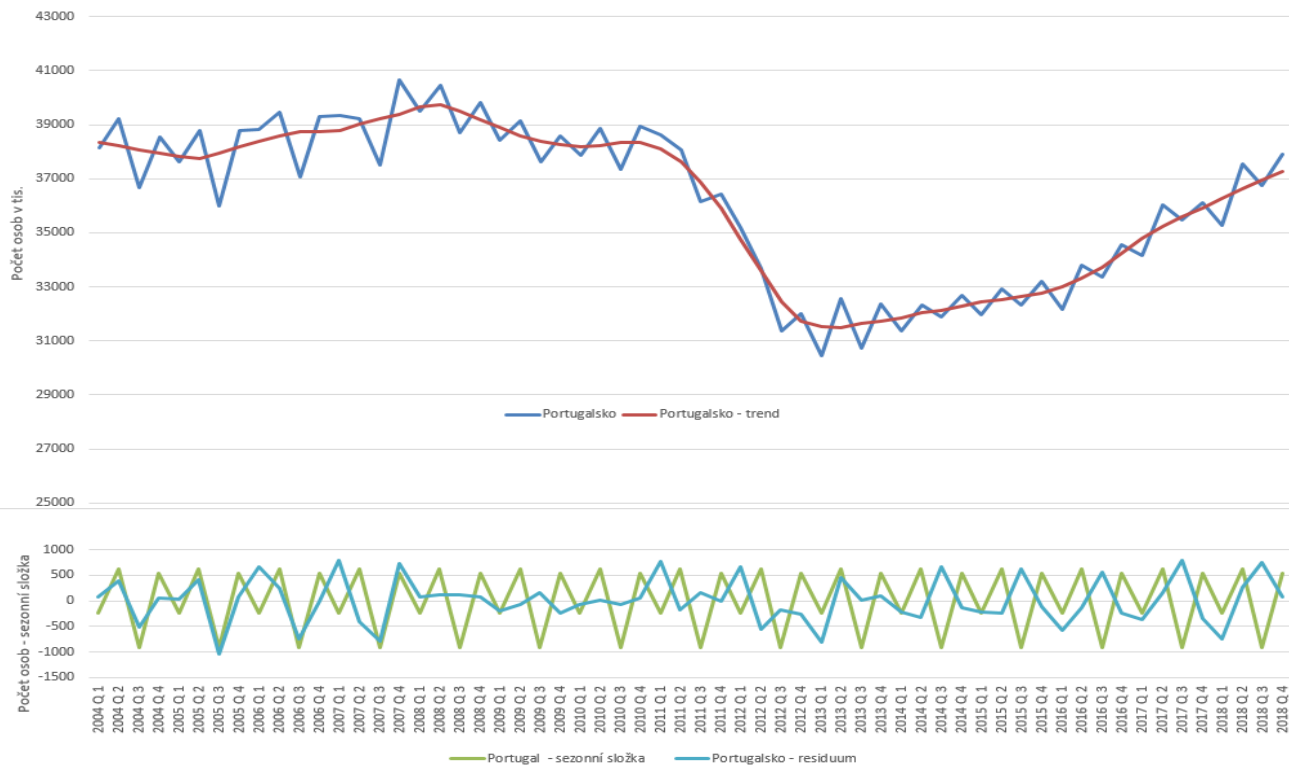


Časové řady

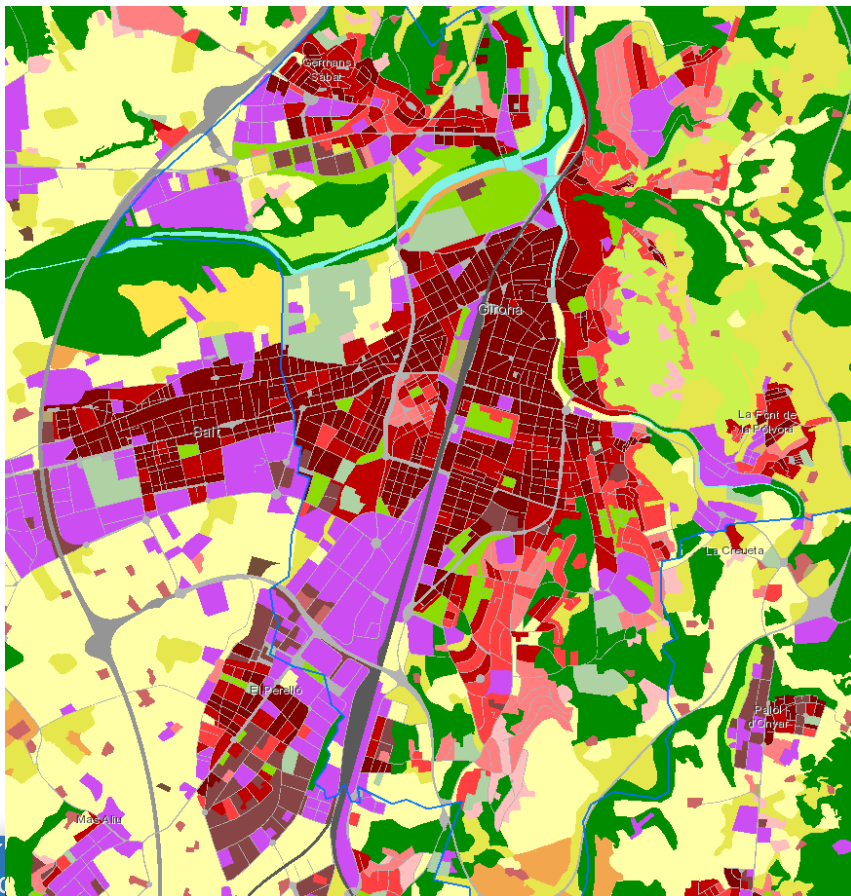


Aditivní rozklad časové řady počtu cestujících v Portugalsku

2004-2018



Copernicus Urban Atlas



Girona, Španělsko

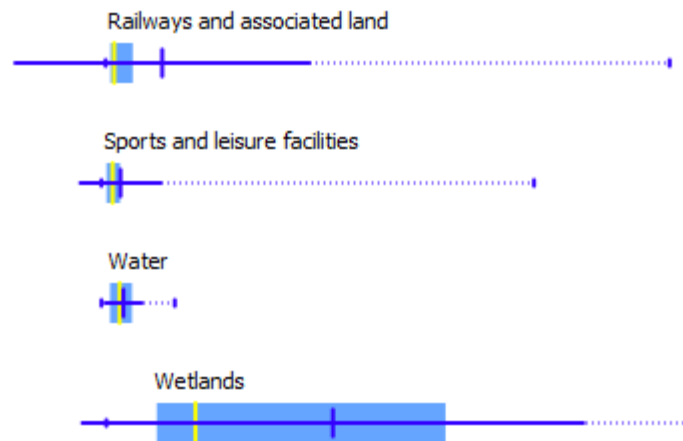
- 11100: Continuous Urban fabric (S.L. > 80%)
- 11210: Discontinuous Dense Urban Fabric (S.L.: 50% - 80%)
- 11220: Discontinuous Medium Density Urban Fabric (S.L.: 30% - 50%)
- 11230: Discontinuous Low Density Urban Fabric (S.L.: 10% - 30%)
- 11240: Discontinuous very low density urban fabric (S.L. < 10%)
- 11300: Isolated Structures
- 12100: Industrial, commercial, public, military and private units
- 12210: Fast transit roads and associated land
- 12220: Other roads and associated land
- 12230: Railways and associated land
- 12300: Port areas
- 12400: Airports
- 13100: Mineral extraction and dump sites
- 13300: Construction sites
- 13400: Land without current use
- 14100: Green urban areas
- 14200: Sports and leisure facilities
- 21000: Arable land (annual crops)
- 22000: Permanent crops
- 23000: Pastures
- 24000: Complex and mixed cultivation patterns
- 25000: Orchards
- 31000: Forests
- 32000: Herbaceous vegetation associations
- 33000: Open spaces with little or no vegetations
- 40000: Wetlands
- 50000: Water

Statistický popis měst

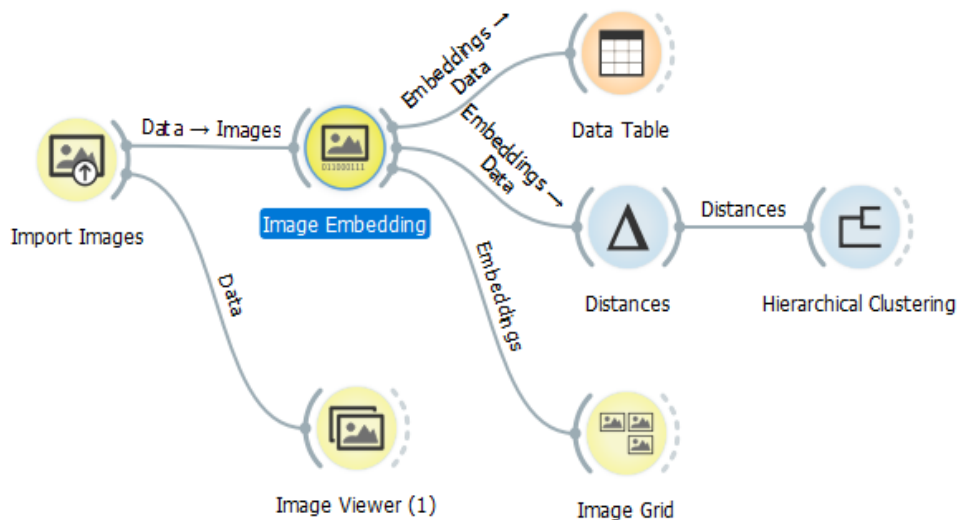
Počet ploch, rozloha ploch, min, max podle kategorií využití území

Hledání podobnosti nad společnými daty

Semestrální úloha - data do jednoho souboru – spolupráce studentů



Natrénovaná neuronová síť - Painters



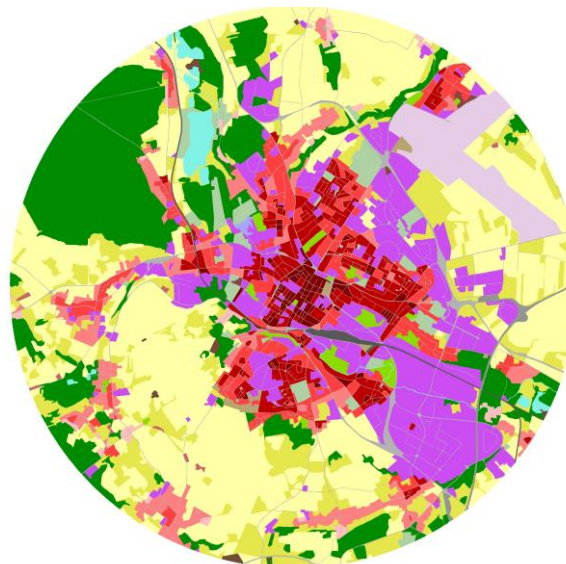
Výstup ANN feature deskriptor
Kosinová vzdálenost
Hierarchické shlukování
k-NN

Podobná města

Německo - Celle

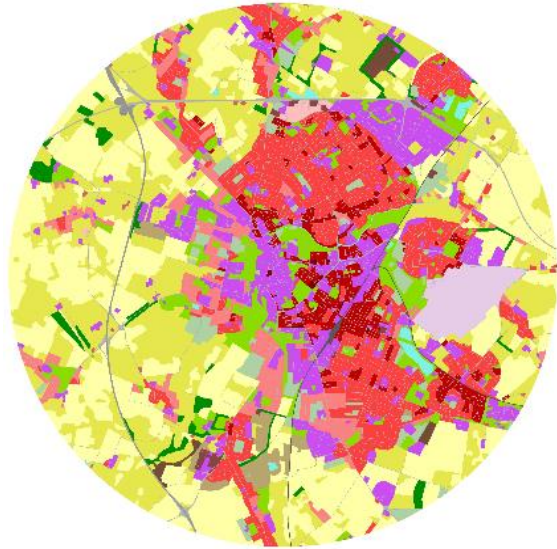


Francie - Beauvais

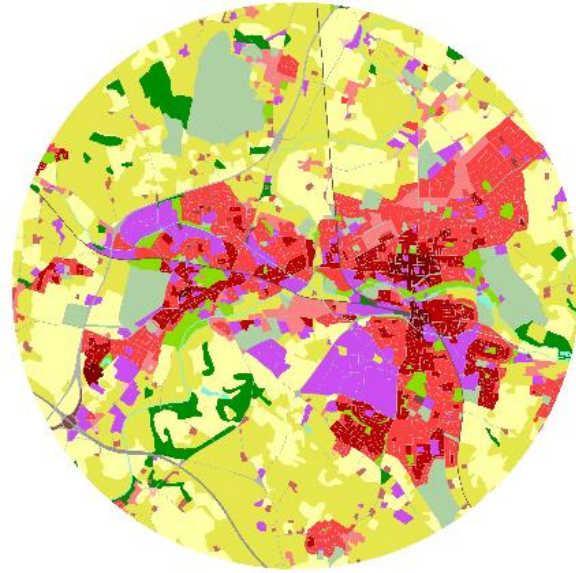


Dobesova, Z. *The Similarity of European Cities Based on Image Analysis*, Conference proceedings CoMeSySo 2019, book series Advances in Intelligent Systems and Computing, Springer

Cambridge



Warwick



Výhody EU dat a použití ve výuce

- Dostupné a volně ke stažení
- Metadata (Summary, Delivery Report)
- Aktuální, průběžně doplňované (časové řady)
- Další vhodná data pro domácí úlohy, semestrální úlohy
- Povědomí o EU, geopolitickém regionu
- Facebook Eurostatu



Děkuji za pozornost

Zdena DOBEŠOVÁ

<https://urbandm.upol.cz/>



With the support of the
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