EU skills and jobs explorer
Interactive dashboards for policy analysts

Aims
The solution aims to support policy analysts in the following questions:
- Which skills are in supply and demand, and where is the biggest skill gap across EU regions?
- How can the skill gap be closed?

Data
- Cedefop vacancy data
- EURES job vacancies and CVs
- Surveys: LFS, SILC and PIAAC
- ESCO and ISCO
- Cedefop ESJ survey
- Various Eurostat data sets at regional level (macroeconomic indicators, sociodemographic data, NUTS region shape files, etc.)

Results
- Skill supply dashboard with collapsable menu
- Correlation analysis of various socio-economic indicators and skill gap

Conclusions
Key achievements:
- skill supply, demand and gaps can be measured on all NUTS and ESCO levels;
- obsolete skills and occupations with high skill volatility can be identified & skills in demand forecasted;
- analysis of qualifications vs skill demand and workforce migration can support policy actions.

Main challenges:
- the biggest issue was asymmetry in data availability across member countries and regions;
- advanced NLP methods are required, which are time consuming.

Methods, technologies and tools
- Entire solution is running on Google Cloud Platform
- All data were loaded on Google Cloud storage (data lake) and then loaded on Google Big Query
- For most data processing we used a cloud instance with Python and R
- There was no time for advanced NLP methods, so we mainly used fuzzy matching
- Dashboards were built using Tableau and embedded into website