# Data Skills Support for Business, Economics and Social Sciences

## Matching Supply and Demand

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# European learners …

… show a strong interest in business skills, including innovation, human learning, and negotiation

… excel in business skills

… are more likely to invest in data science skills & deep learning

Search interest for 'how to become" a data analyst reached a global all-time high in 2023

Which special skills do you need?

For the audience, it is probably very interesting to learn … what do you do?

How to acquire these skills?

| Task | Skillset | Demand | Supply |
|---|---|---|---|
| Responsible science | Open Science (RDM) | Policy driven | Formal education<br>**Carpentries (Data, Software)**<br>Erasmus Data Repository (EDR) |
| Thesis-support, assignments | Finding & collecting financial data<br>Data-preprocessing<br>Domain expertise | Schools: RSM & ESE<br>Cyclical<br>Students | EDSC: Individual support,<br>Themed workshops |
| PhD & Research Staff | **Advanced skills — Data & AI driven:**<br>Machine-Learning<br>Data-engineering | **Cross-disciplinary support**<br>Large datasets<br>Cloud-data-infrastructure | Data Skills & (Text) Analytics Courses (MATLAB)<br>Python workshop<br>Custom datasets |
| Projects | Domain expert data curators<br>Programming | **Strong demand for hands-on support** | Improved findability & UX<br>Data Catalog<br>Curated and custom datasets<br>LLM support |
| "Engage" | Data professionals (cf. Coursera level 2 & 3) | Data story telling<br>AI<br>Data visualization<br>Data analytics | "Missing" |

# Skillset development

Learning from data must *go beyond* the current standard of knowledge transfer to match current data-driven progress in science …

…  should be supplemented with data-specific skills

# Data Skills at a glance

## Data curation of multi-modal data
Preprocessing

## Advanced data management practices
Data structures, pipelines and graphs

## Transdisciplinary support
Collaborative science platforms & tools e.g. GitHub, API's, MATLAB

## AI-Data
Curated datasets to support LLM's, Reinforcement Learning, Continuous Learning, Policy Based Learning, Value-Based Learning

# Data, Software & Library Carpentries

+ EUR University Membership
+ Interuniversity- collaboration
+ Off-the-shelf course material
+ Continuity
+ Responsible Science
-  Beginners level

Thanks !