

# Big Data for Labour Market Intelligence

Програма з розбудови спроможності 2022 р.

## Модуль 1: Технічне навчання

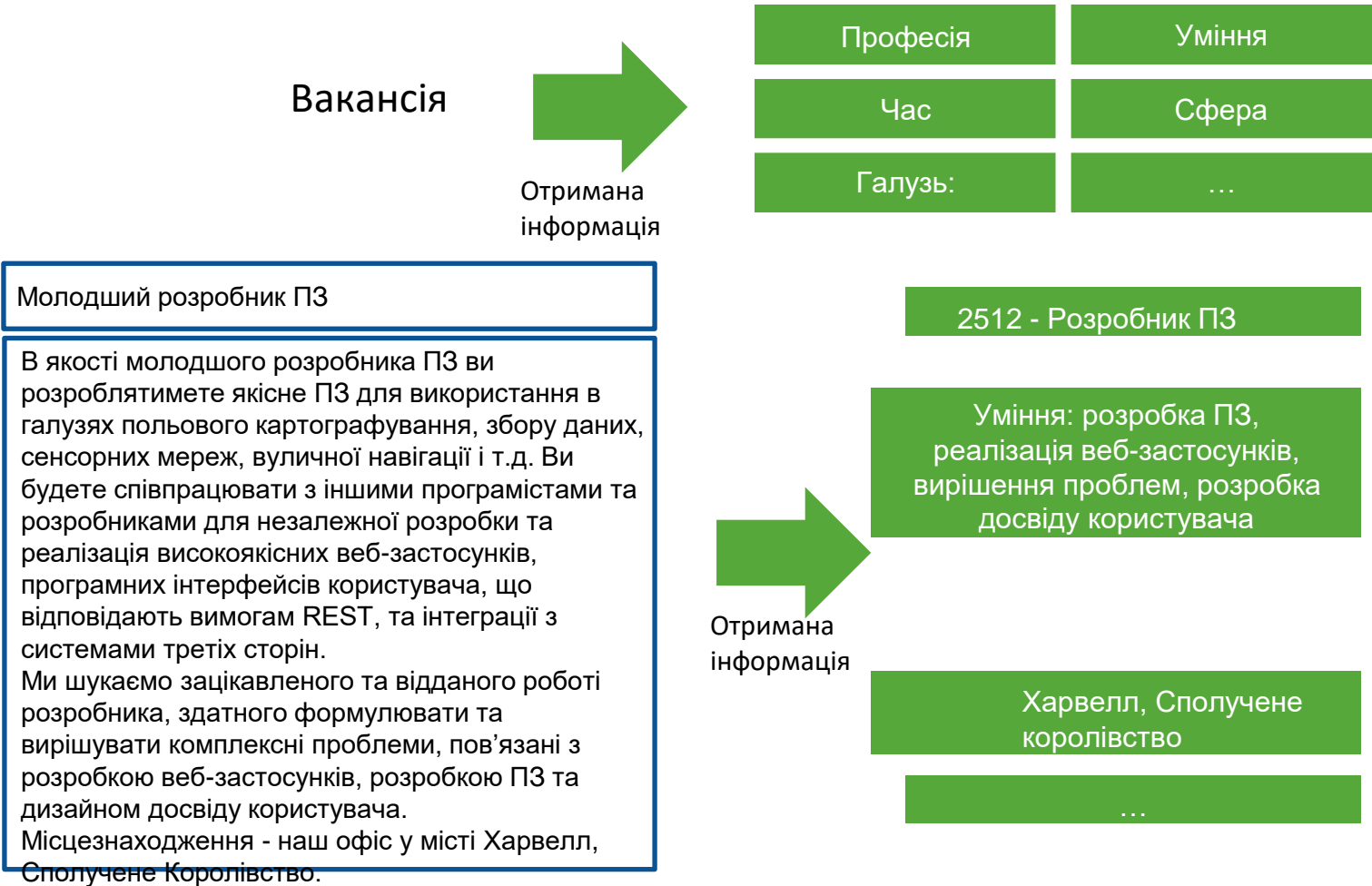
### Заняття 6

Класифікація даних, пошук даних, практичні вправи та  
практикум з програмування

# Класифікація даних

- **Мета:**
  - Отримати з даних інформацію та структурувати її для презентації
- **Виклики:**
  - Обробка великого об'єму неоднорідних даних, викладених різними мовами
- **Підхід:**
  - Розробка гнучкої структури, залежної від мови, адаптованої для різних компонентів інформації. Деякі пов'язані з цим виклики:
    - Класифікація компоненту «Професія»: поєднання таких методів, як машинне навчання, тематичне моделювання і неконтрольоване навчання
    - Класифікація компоненту «Уміння»: поєднання різних методів, таких як аналіз текстів на основі корпусного підходу або подібності з використанням бази знань
- **Компоненти:**
  - Забезпечення отримання пояснювальної інформації, методів класифікації протоколювання та відповідні функції

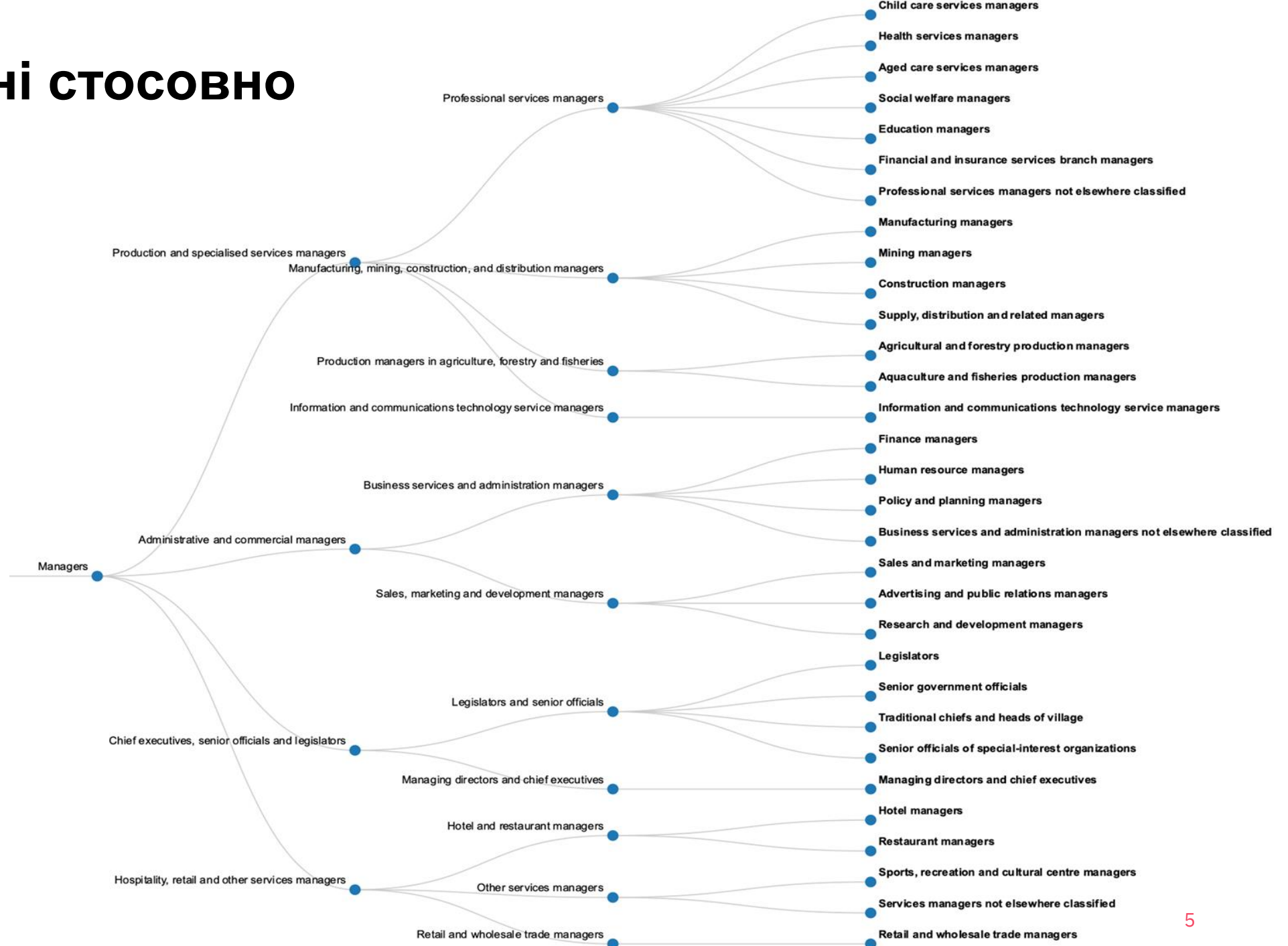
# Класифікація - Приклад




# Конвеєр даних щодо професії



# Вихідні дані стосовно професії



# Визначення місцезнаходження вакансії



## C#, XML and Data Software Developer

Scottish Government ★★★★★ 40 reviews - Edinburgh  
£28,891 - £33,094 a year - Full-time, Part-time, Permanent

[Apply On Company Site](#)

For the full job description and to apply, please visit the Work for Scotland website  
Benefits

**Pensions**

Civil Service pension schemes may be available for successful candidates.

Civil Service 15 days ago - [apply on company site](#)



Відповідність  
місцезнаходження  
вакансії

NUTS 2021 + інші джерела



Единбург



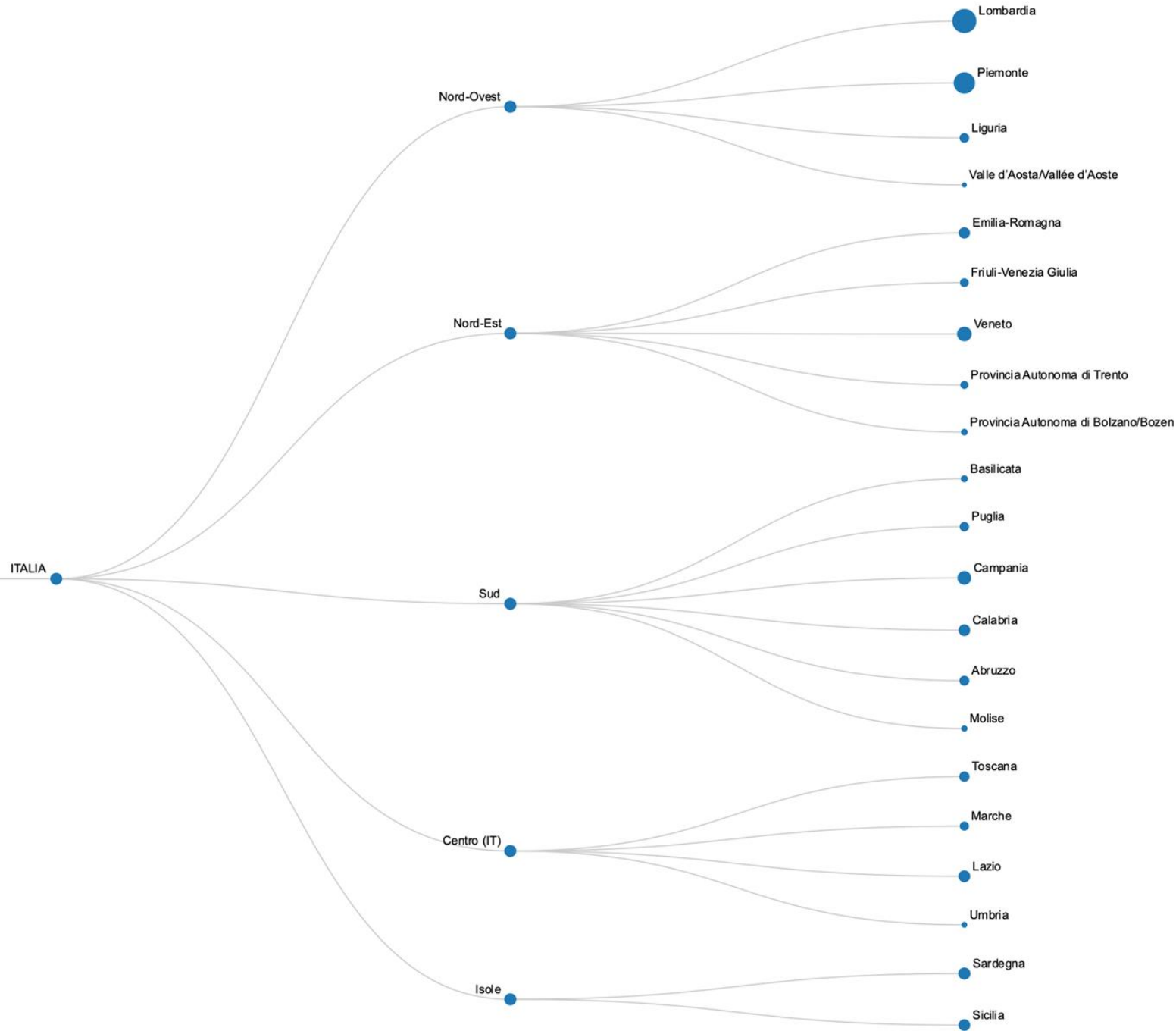
UKM25

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"idLau_2"	
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"nutLiv_2"	Eastern Scotland
"nutLiv_1"	SCOTLAND
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# Конвеєр даних щодо місцезнаходження вакансії:

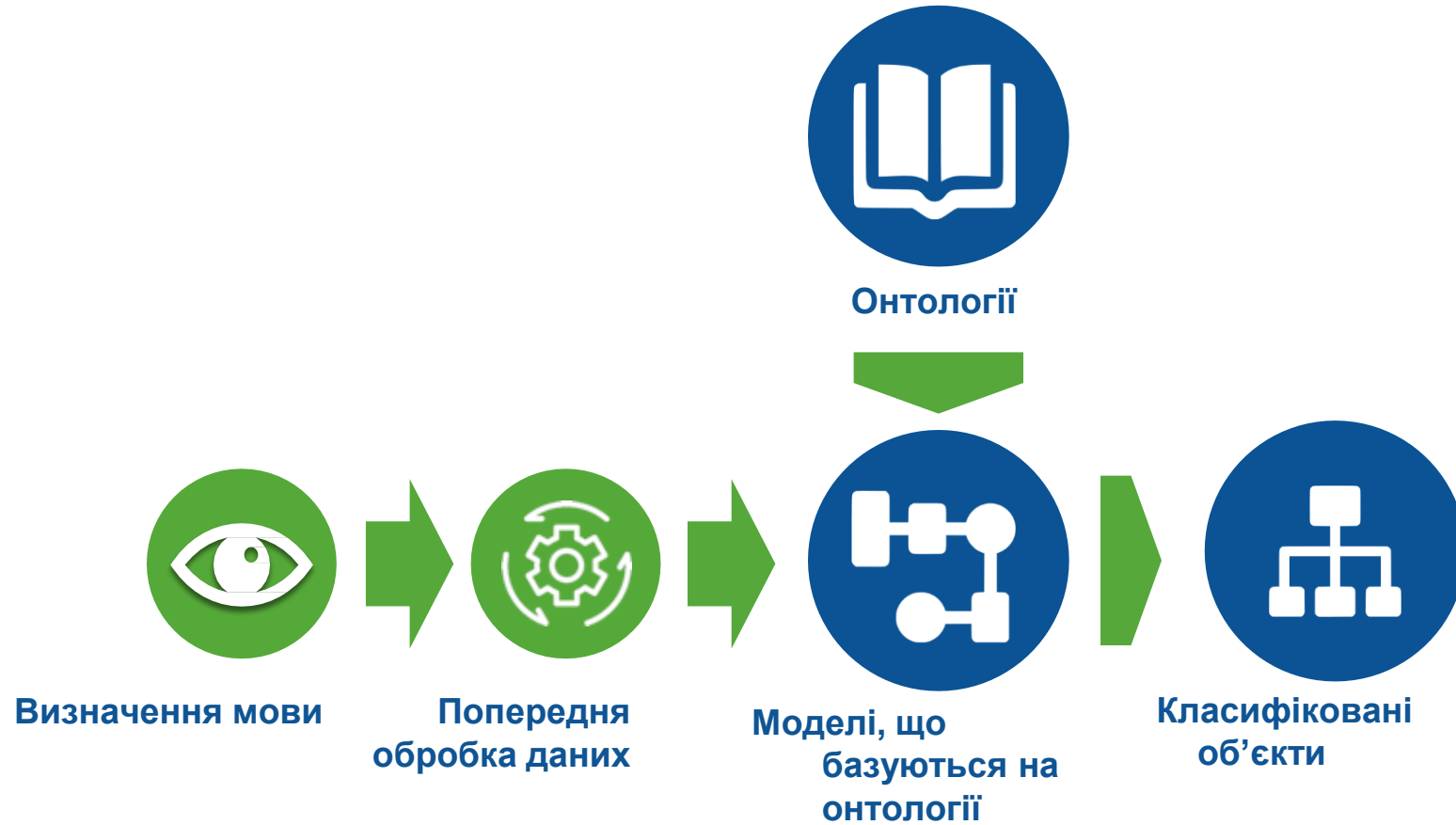


# Вихідні дані щодо місцезнаходження вакансії





# Конвеєр даних про уміння



Search

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**Fabasoft****Fabasoft International Services GmbH****Application Developer (w / m)**

Linz, Vienna



Solid employment



full-time



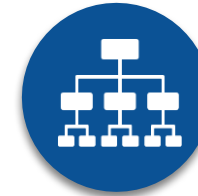
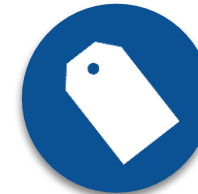
Erschienen: vor 12 Tagen

You are the right one, if

- you are interested in designing, implementing and integrating specialized applications and you like to work with high-end development tools and infrastructures
- you like using state-of-the-art web technologies to realize customized software solutions while being able to expertly use standard products / SDKs as well as libraries
- You have a solid computer science education (HTL, FH or University) and solid programming skills with Java and Eclipse
- Ideally, you have already gained experience with SOAP, WSDL and Web Services, as well as object-oriented modeling (UML) skills

We offer you

- working in a dedicated, highly motivated team in a professional environment
- Consistent training and further education as well as broadening horizons by attending international conferences
- interesting development opportunities for Certified Project Manager, Certified Scrum Master etc.
- numerous benefits, benefits and cool events as well
- above-average payment (at least EUR 35,000 gross annual salary, depending on your experience and qualifications also more) and a performance-based bonus system

**Contact Person:** Mag. Dipl.-Ing. Christian Distelberger**E-mail:** [job@fabasoft.com](mailto:job@fabasoft.com)**Tel:** +43 732 606162-0**Шум****Текст для усунення багатозначності****Альтернативні назви****Послідовність та зв'язок**

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**Шум**

Ми пропонуємо

<робота>

<високо мотивована  
команда>

<професіональний>

<сертифікований  
менеджер проекту>

<Scrum>

<що базується на  
результативності>

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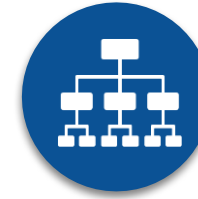
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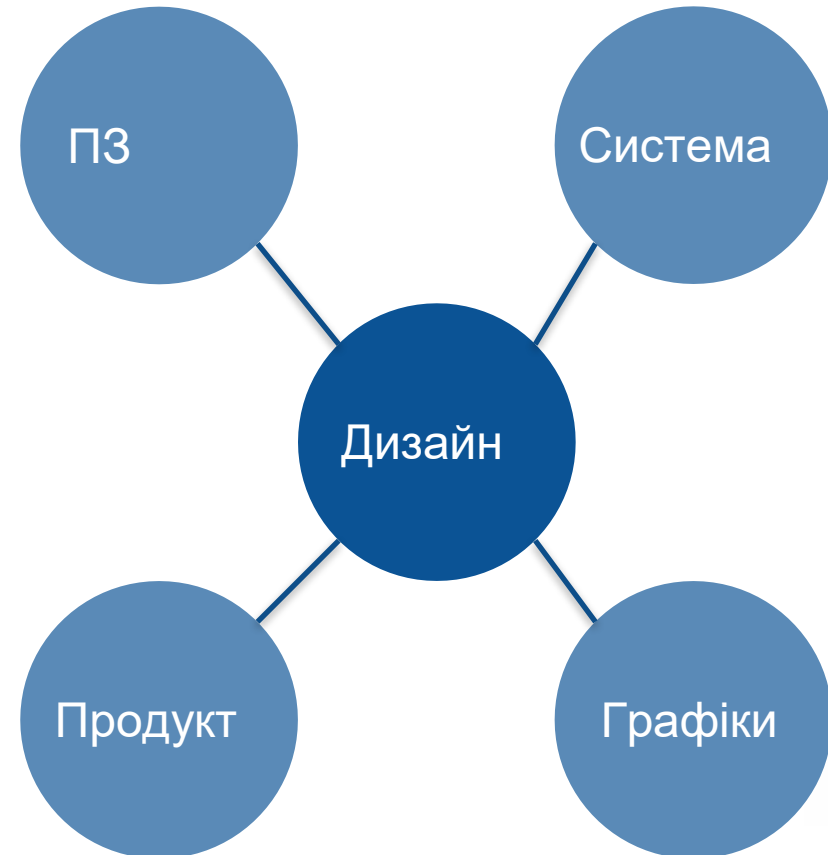
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# Текст для усунення багатозначності

&lt;дизайн&gt; &lt;застосунок&gt;





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full-time

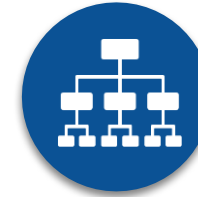
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# Текст для усунення багатозначності

&lt;розробка&gt;

&lt;застосунок&gt;



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# Альтернативні назви

&lt;інформатика&gt;

Інформатика



&lt;ESCO&gt;

Комп'ютерне програмування

Search

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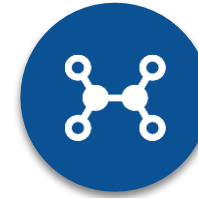
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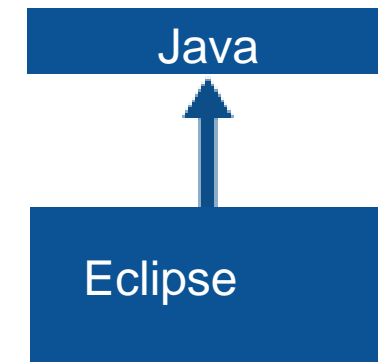
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# Послідовність та зв'язок

&lt;java&gt; &lt;eclipse&gt;



# Модель набору даних

2 таблиці

## Документ FT

1 рядок для кожного з параметрів:

- Ключ загального ідентифікатора (General\_ID - Key)
- ОДВ
- Джерело даних
- Місцезнаходження вакансії

Чому? Тому що для кожного ОДВ ми можемо визначити вакансію з декількома локаціями

Наприклад, «розробник ПЗ у Лондоні/Ліверпулі»

## Аналіз умінь FT

1 рядок для кожного з параметрів:

- Ключ загального ідентифікатора (General\_ID - Key)
- ОДВ
- Джерело даних
- Місцезнаходження вакансії
- Уміння

Чому? Тому що для кожного ОДВ ми можемо визначити декілька вмінь.

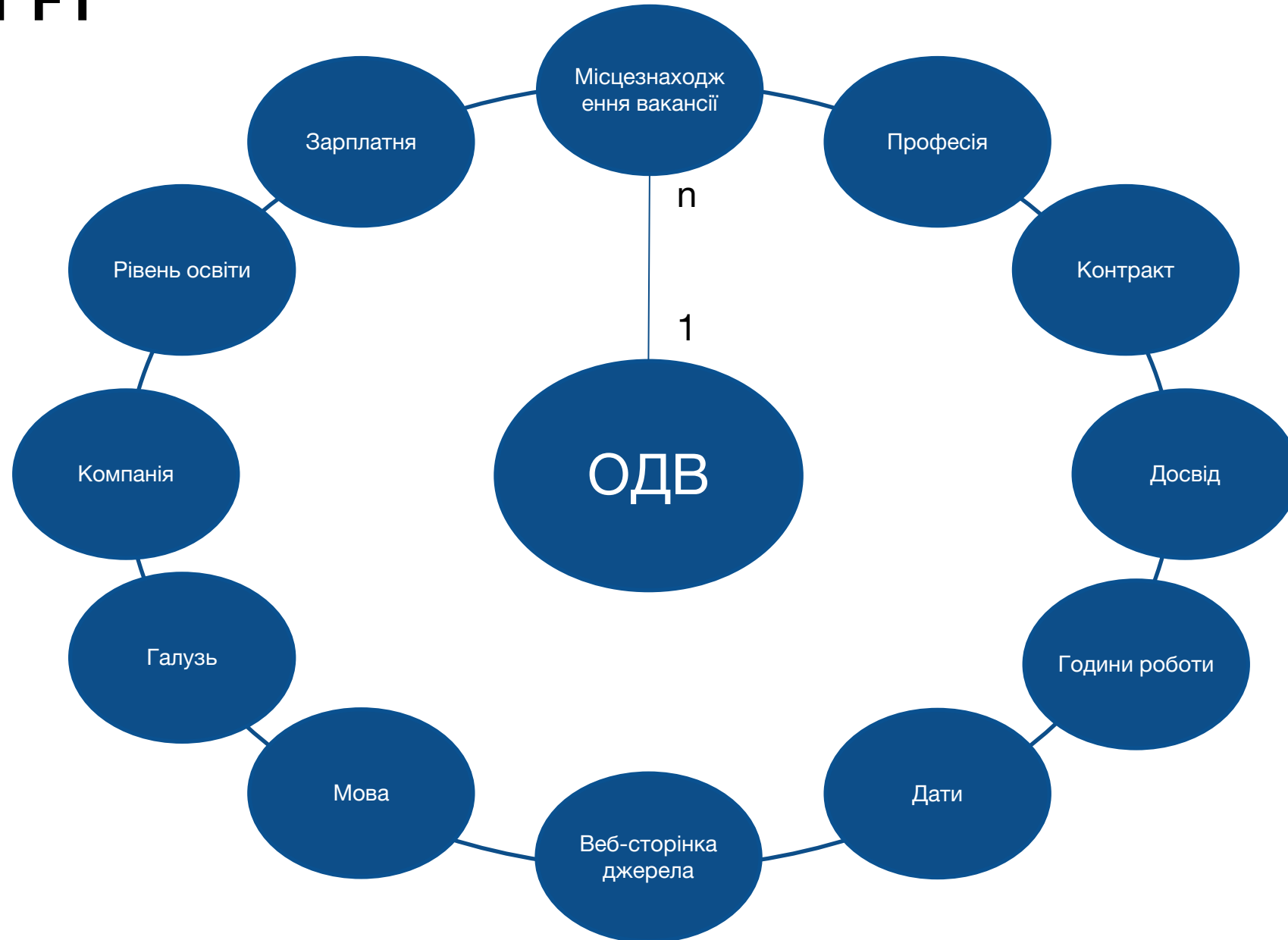
Наприклад, «розробник ПЗ у Лондоні/Ліверпулі з підходом, орієнтованим на потреби клієнтів, що володіє англійською та вміє справлятися зі стресом»



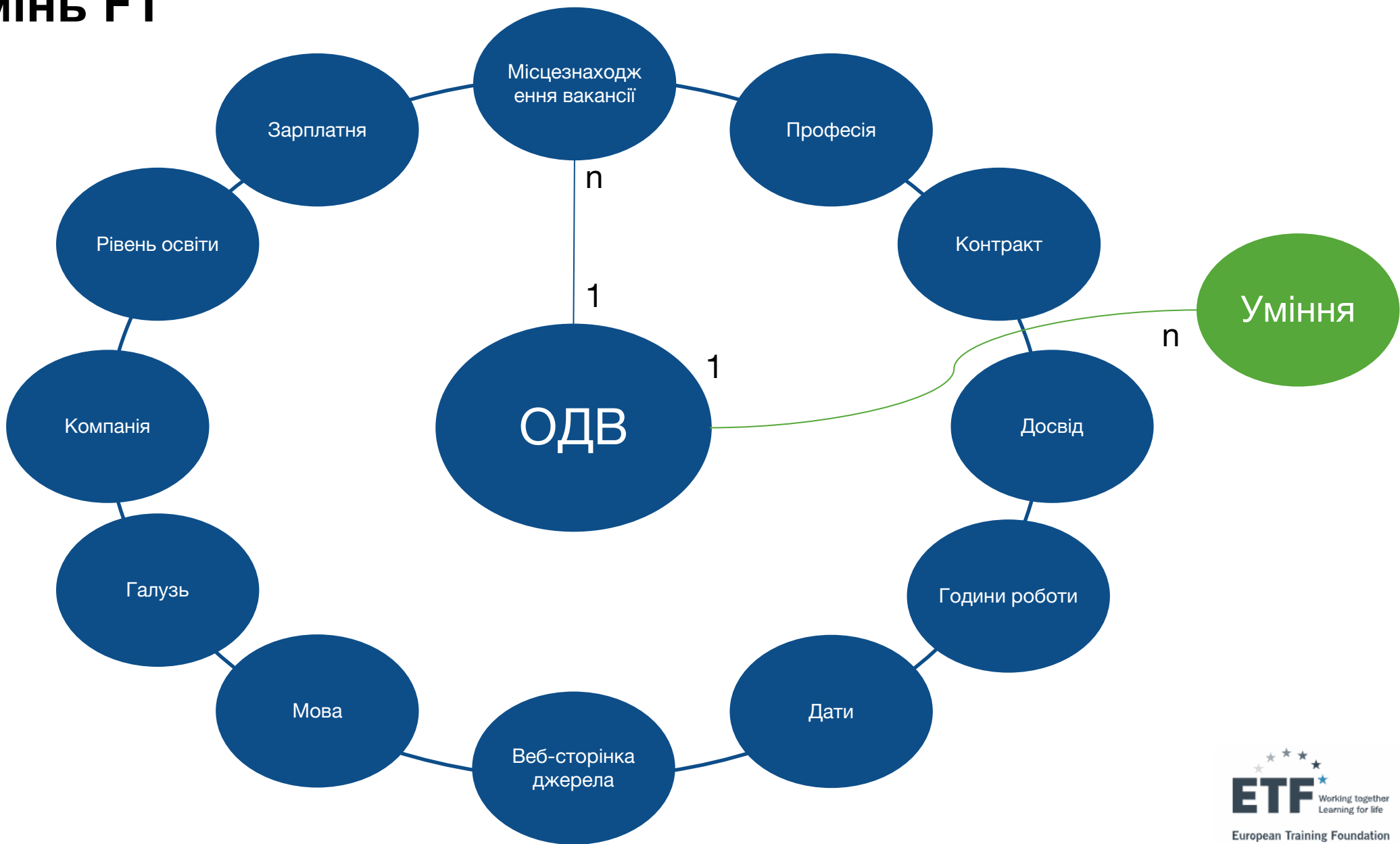
# Модель набору даних

Отже, для того, щоб отримати кількість вакансій, необхідно розрахувати унікальний показник на основі загального ідентифікатора (General\_ID)

# Документ FT



# Аналіз умінь FT



# Інструменти




# Консоль AWS Athena


Data source

AwsDataCatalog ▼



Database

etf\_presentation\_training ▼

Tables and views Create ▼ 

 *Filter tables and views*

▼ **Tables (2)** < 1 >

 ft_document_en	⋮
 ft_skill_analysis_en	⋮

# Інтерактивне заняття з Python та SQL