

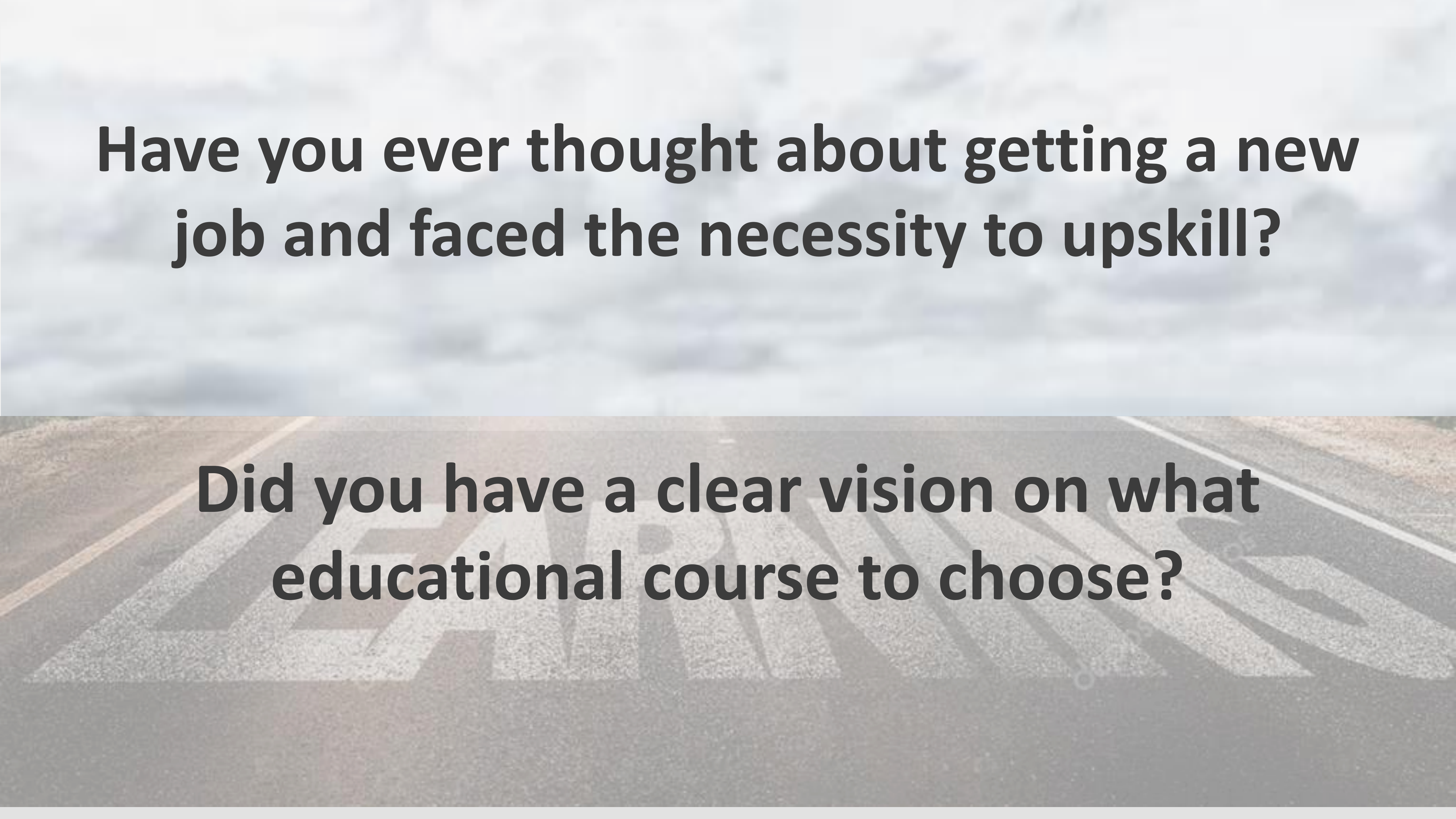
**FICC** 2021

# A modern approach to MOOC recommender systems using ICT job classification

Presented by: Kuruppuge Divani Mandira

**Authors:**

Sergey Avdoshin (savdoshin@hse.ru),  
Elena Pesotskaya (epesotskaya@hse.ru),  
Kuruppuge Divani (dkuruppuge\_1@edu.hse.ru)



**Have you ever thought about getting a new job and faced the necessity to upskill?**

**Did you have a clear vision on what educational course to choose?**

# What is the problem?



**The large variety of MOOC platforms** and courses, confuses users as to which are the most beneficial and time worthy choices.



**A lack of complete satisfaction** of employers with the competencies of job candidates.



People usually **waste a lot of time on making a decision** and building a plan on how to upskill.

# Our Solution

A **recommender system** which suggest educational courses based on the skills and competencies necessary for a particular profession based on user preference.



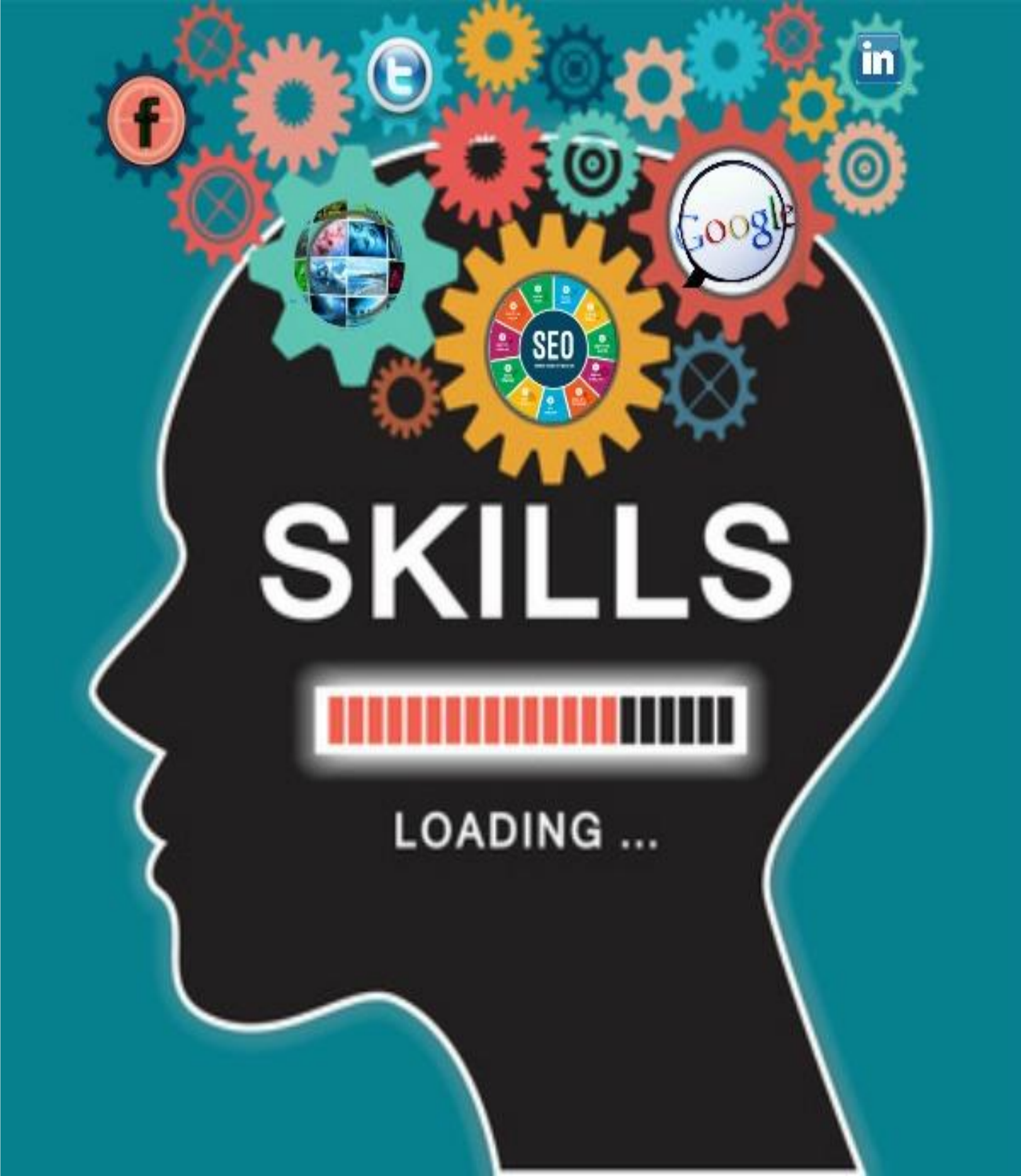
Skill and job classification



Personalized educational path



Course recommendation through MOOC platform aggregation



# How to find the most demanding jobs?

For this we use **ESCO\*** classification - which is updated constantly with highly demanded jobs classification.

## Our journey starts from:

1. Choosing a job
2. Getting the shortest path to it
3. Getting a straightforward recommendations on what to learn
4. Understanding on how to reach the goal

*Existing examples of services for personalized education:*



Skillbox



# OPPORTUNITY

Our recommender system can be implemented using free and open-source software and frameworks with the help of affiliate programs offered by MOOC platforms which can be a profitable means of monetization.



More than  
900  
MOOC platforms

More than  
85 million  
MOOC users

70%-85%  
earnings  
through  
affiliations

The infographic consists of three overlapping circles. The largest circle is orange and contains the text 'More than 900 MOOC platforms'. The top-right circle is dark blue and contains the text 'More than 85 million MOOC users'. The bottom-right circle is purple and contains the text '70%-85% earnings through affiliations'. The circles overlap in the center-right area of the slide.

More than  
85 million  
MOOC users

70%-85%  
earnings  
through  
affiliations

# VALUES

- **Save time**
- **Shorten the path to the career goal**
- Recommendations on how to upskill to get your dream job

# Our advantages/key features



Openness and free access



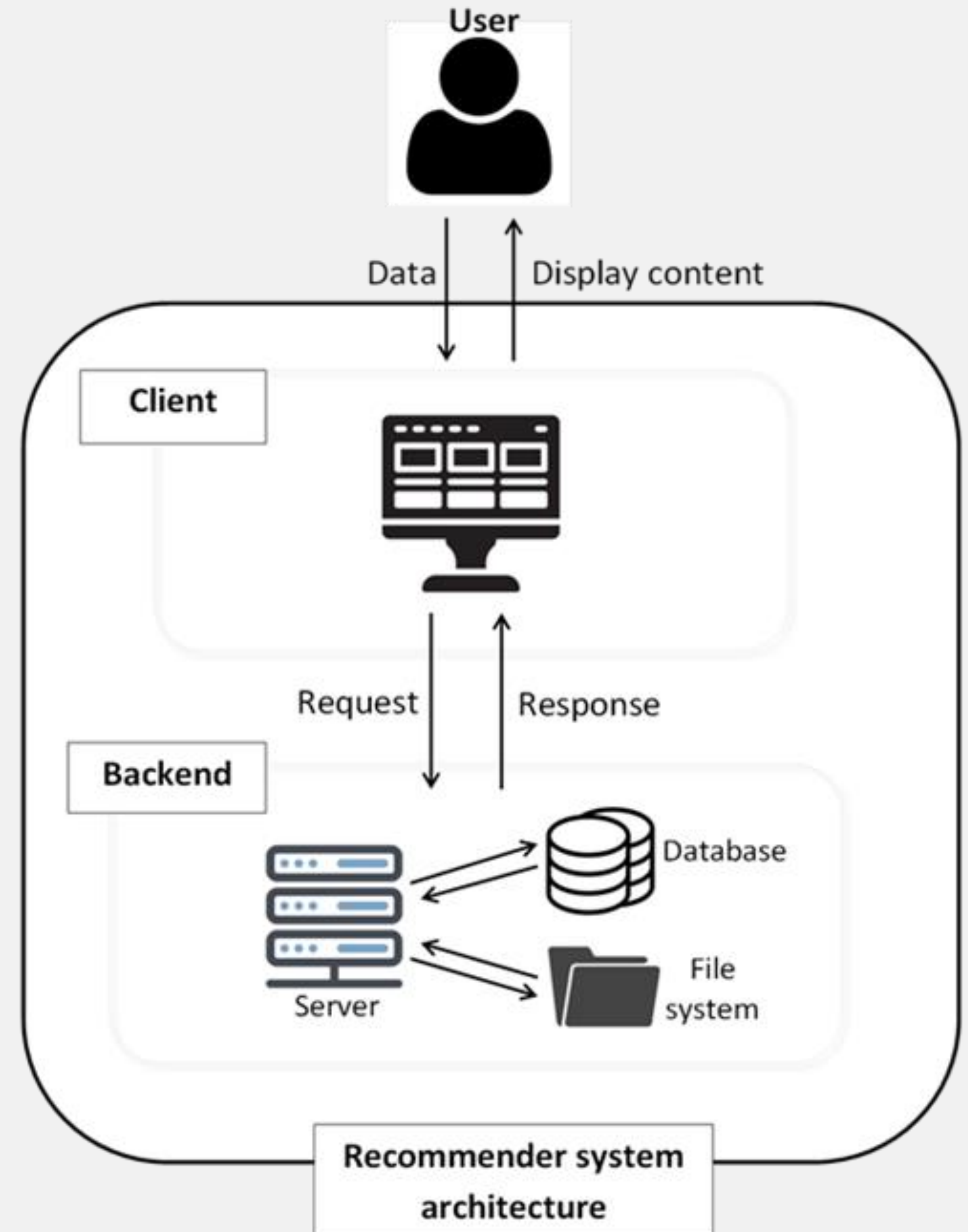
Skill classification and MOOC provider aggregation



Audience worthy content

# System architecture, How it works?

- Using client component user select which competencies they are interested in learning.
- Selection makes a request to the database through the server.
- Display the list of courses recommended for that particular job and their information.







# Limitations

- We limited our research by **not going further into details about the comparisons of recommender systems** and the computations involving them.
- Proposed system **does not plan career path behalf of the user**, but it is merely an instrument provided for users to get access to the necessary sources while planning their career path.
- **Limited to focusing on user needs** and the requirements and information sources which are the basis for the implementation of the proposed application.
- Does not show **the needs of other parties** involved in this system.
- Statistics on the **probable results of the system** are not discussed in the paper.

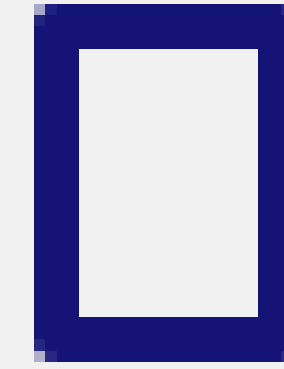
# Conclusions

- ✓ Means of gaining education and knowledge has progressed benefiting students with technological improvements.
- ✓ Need a system that suggest educational courses based on the skills and competencies necessary for a particular profession based on user preference
- ✓ More instruments are necessary for planning career development path.
- ✓ Proposed a system that allows users to compare different MOOC platform courses in one place so that they can keep up with the modernized technology trends and update their skill set.



**Thank you!**  
**Any Questions**

**???**



Divani Kuruppuge  
Sergey Avdoshin,  
Elena Pesotskaya  
HSE University,  
{savdoshin,  
epesotskaya}@hse.ru

