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# ACTIVITY TENDENCIES OF UNIVERSITIES 4.0 IN INDUSTRY 4.0

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# Topicality

- The Government of Ukraine has determined that the **Industry 4.0** ecosystem involves comprehensive digitization and automation of production processes and management in the real sector of the economy.
- The time of martial law slowed the implementation of Industry 4.0 technologies, but the world society is trying to actively promote them through new mechanisms for solving modern internal and external problems of the state, in particular, regarding the prospects for the development of the modern defense-industrial complex.
- What is the role of **University 4.0** here?
- A fundamental article Kovaliuk, Tetiana; Kobets, Nataliya. The Concept of an Innovative Educational Ecosystem of Ukraine in the Context of the Approach" Education 4.0 for Industry 4.0". In: ICTERI. 2021. p. 106-120. URL: <https://ceur-ws.org/Vol-3013/20210106.pdf>

# What is Industry 4.0? University 4.0?

- Industry 4.0 is a coordinated, government initiative to mobilize all national resources to accelerate technological change and maintain leadership in global competition.
- University 4.0 is a university that responds to the challenges of modern technology development with an emphasis on project activities
- The unifying component is technology!

# Ensuring restoration of critical infrastructure

- This can be facilitated by the establishment of the **University 4.0**, which is oriented towards the external world and the development of society, and is integrated with industry and built on the principles of digitization of processes.
- According to the team of authors, at the present time there are no universities in Ukraine in their purest form, which would represent the "University 4.0" model, and they call for the support of the educational and scientific sphere in Ukraine in order to create conditions for sustainable, controlled, gradual development.

# Task

- To determine the role and place and potential opportunities for mutual development, it is necessary to determine the level of interest in the topics of University 4.0 and Industry 4.0 in the world

# Method

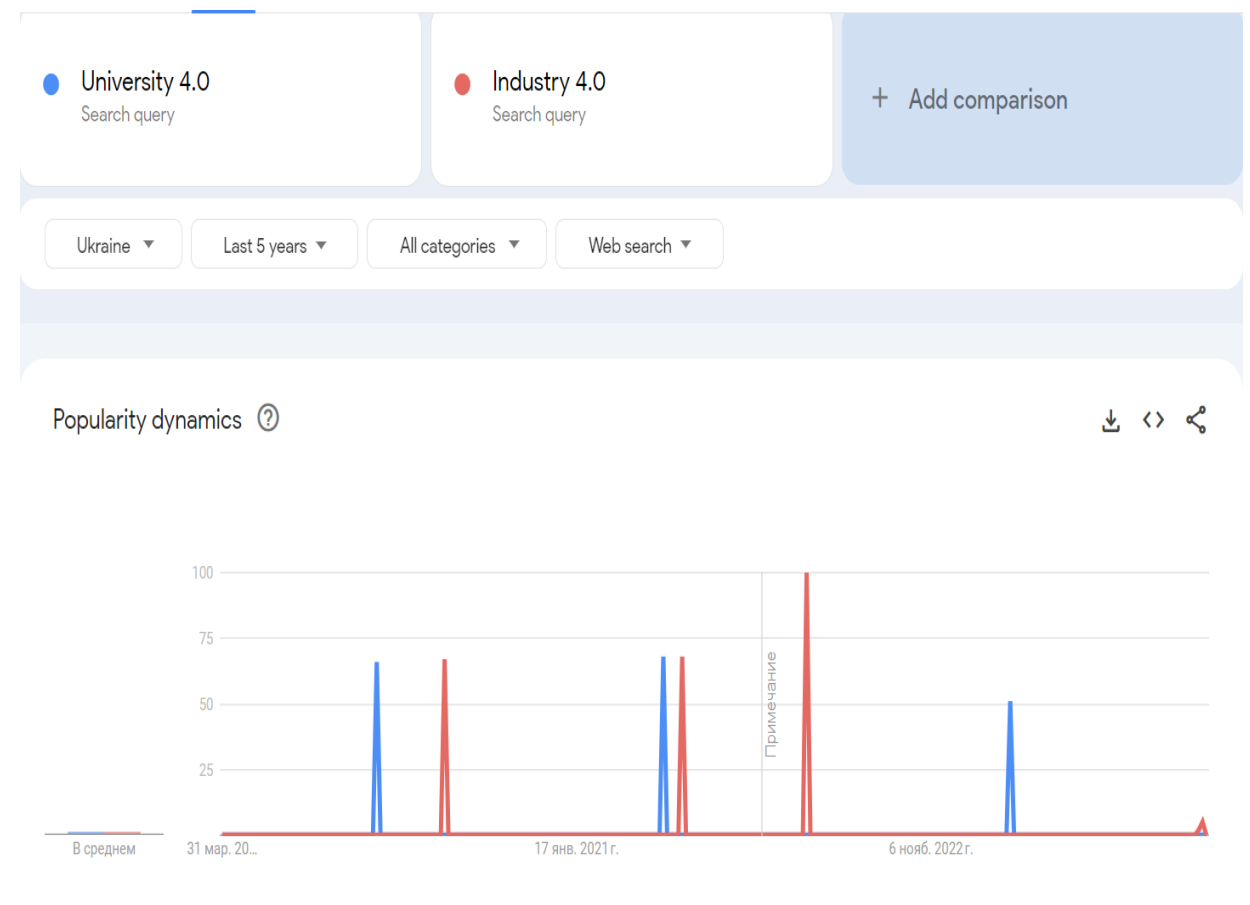
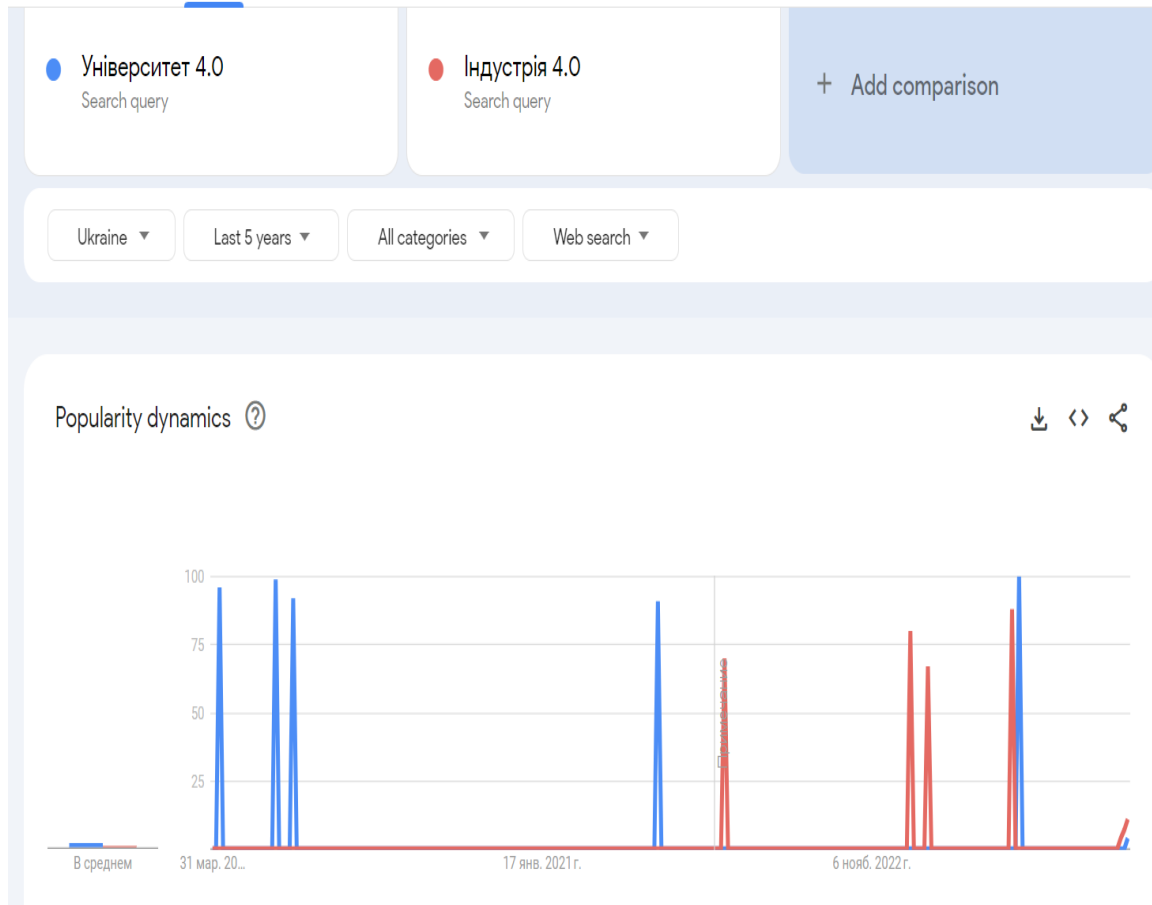
- **Google Trends** is a service that allows you to determine the interests of target groups in different countries of the world.
- The peculiarity of this Google tool is to provide users with **quantitative and qualitative** query parameters to the total amount of queries in Google, which creates an opportunity for researchers to determine the prospects for the development of the processes they are investigating.

# The results

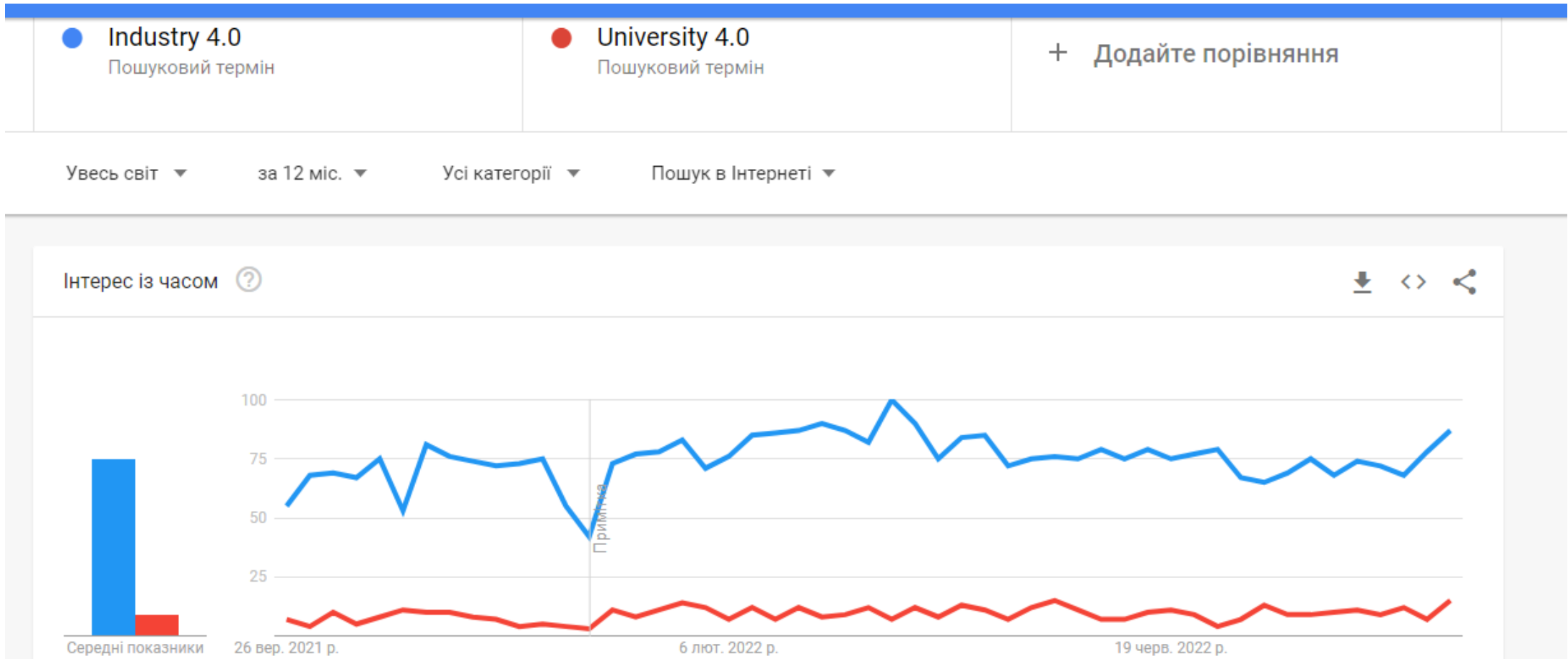
- During the period of martial law, interest in the topic of **Industry 4.0** in Ukraine dropped to almost zero, while interest in the digital economy remained stably high and even grew according to the use of the Google Trends search tool
- Regarding the term **University 4.0**, the measurement of interest in this service in the Ukrainian language is statistically insignificant.



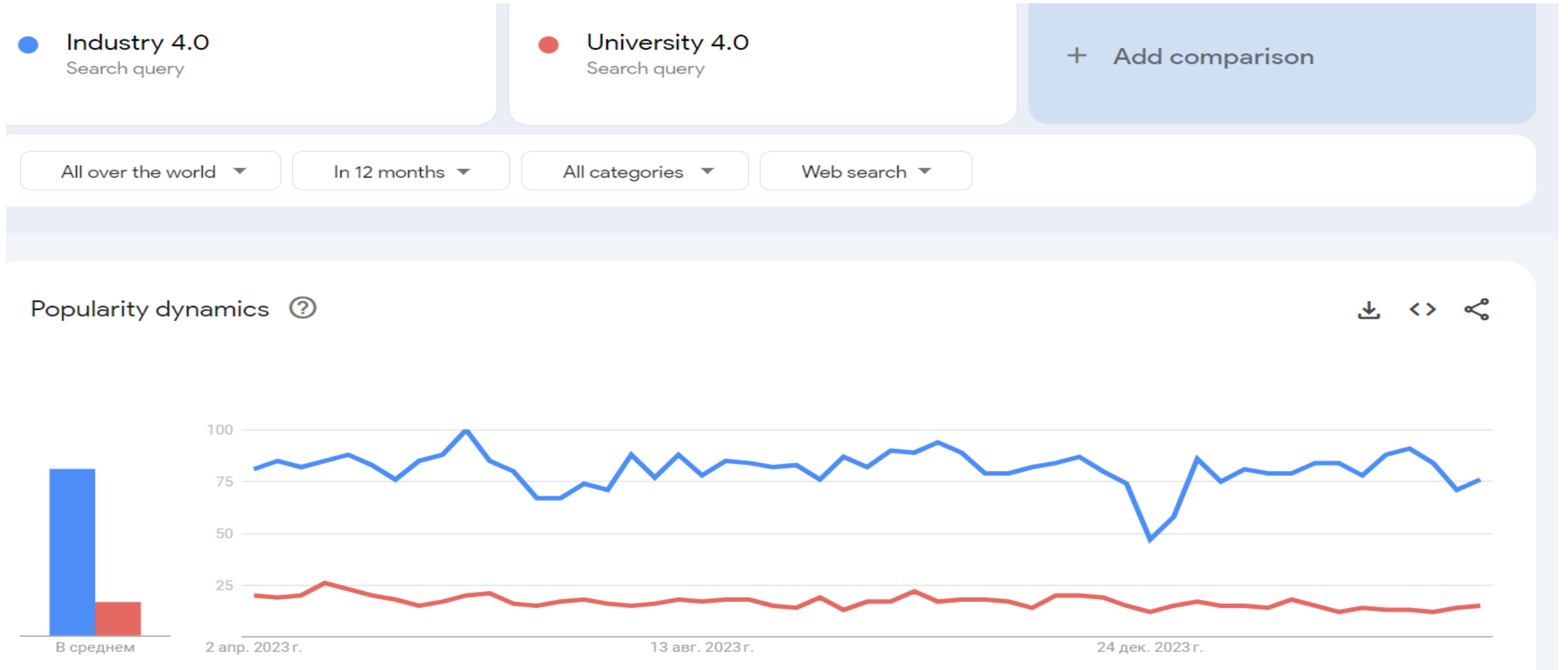
# Level of interest in University 4.0 - Industry 4.0 topics in Ukraine (Ukrainian language/English language) in 5 years



# Ratio of interest in Industry 4.0 and University 4.0 in the world 2022



# The ratio of interest in Industry 4.0 and University 4.0 in the world at the beginning of 2024



# Country distribution

Industry 4.0 ● University 4.0

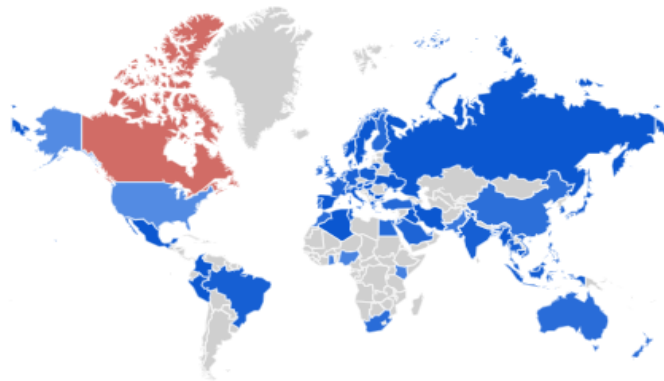
Worldwide, within 12 months.

## Comparison by region

Region ▾



● Industry 4.0 ● University 4.0



Sorting: Level of interest in the topic "Industry 4.0" ▾

61	Jordan	
62	Kenya	
63	Nigeria	
64	United States	
65	Canada	

The color intensity depends on the percentage of requests. [READ MORE...](#)

< Regions: 61–65 out of 65 >

# Assessment of interest in the topic University 4.0 and Industry 4.0 in the world

- Assessment of interest in the topics University 4.0 and Industry 4.0 in the world
- Across the world over time, the level of interest in these topics is statistically significant. As for the trends of recent years, they coincide and go in unison.
- Meanwhile, the demand for the topic Industry 4.0 significantly exceeds the topic University 4.0, as approximately 80:20.
- According to the regional distribution on the subject of University 4.0, Canada is in first place, and the United States is in second place.

# The results of the comparison of requests for Industry 4.0 and University 4.0 in Canada

- In Canada, interest in the subject of University 4.0 exceeds interest in the subject of Industry 4.0 as at 21:18 p.m.
- Meanwhile, the distribution of interest in these topics is split in half, so the importance of these two topics among consumers is almost the same, which corresponds to the essence of their related definitions.
- On a regional basis, the **province of Ontario** is highlighted, which has the same 50% to 50% distribution of interest in these topics, but other regions have almost no statistically significant interest in the topic of University 4.0.

# Level of interest in topics in the US

- The topic of Industry 4.0 dominates the queries on the topic of University 4.0 as 68:39.
- As for the trends, they also coincide in time.
- According to the regional distribution, 5 regions are leading in terms of interest in **University 4.0**: **New Jersey, New York, Texas, Florida, California**, where it decreases in distribution from 52% to 27%, which is a high indicator of interest in this topic.
- Interest in the topic of **University 4.0** falls in the fall, when educational processes become more active.

# Conclusions

- The obtained results indicate that it is important to determine the trends of both the industry 4.0 ecosystem itself and the role of universities 4.0 in this.
- Both future models and different policies should be discussed.
- What direction of interaction of science, education, production will be chosen, and what image of the future University 4.0 will be built.
- Historically, the university is a special cultural phenomenon, but it arose from the first production corporations in cities, therefore, from the very beginning of its existence, it is close to the industrial ecosystem.
- So, what is the University 4.0 of the future: only a center of culture or a community of implementation of Industry 4.0 technologies, or their combined model.
- What principles of unification will be laid down in it is the subject of further research.



• Thank you !

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