

Ministry of Education and Science of Ukraine

National University of Food Technologies

92th
International scientific conference
of young scientist and students

"Youth scientific achievements
to the 21st century nutrition
problem solution"

April, 20–24 2026

Part 2

Kyiv, NUFT, 2026

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The publication contains materials of 91th International scientific conference of young scientists and students "Youth scientific achievements to the 21st century Nutrition problem solution".

It was considered the problems of improving existing and creating new energy and resource saving technologies for food production based on modern physical and chemical methods, the use of unconventional raw materials, modern technological and energy saving equipment, improve of efficiency of the enterprises, and also the students research work results for improve quality training of future professionals of the food industry.

The publication is intended for young scientists and researchers who are engaged in definite problems in the food science and industry.

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Матеріали 92-ї Міжнародної наукової конференції молодих учених, аспірантів і студентів "Наукові здобутки молоді – вирішенню проблем харчування людства у XXI столітті", 20–24 квітня 2026 р. – Київ: НУХТ, 2026. – Ч.2. – 499 с.

Видання містить матеріали 91-ї Міжнародної наукової конференції молодих учених, аспірантів і студентів "Наукові здобутки молоді – вирішенню проблем харчування людства у XXI столітті".

Розглянуто проблеми удосконалення існуючих та створення нових енерго- та ресурсощадних технологій для виробництва харчових продуктів на основі сучасних фізико-хімічних методів, використання нетрадиційної сировини, новітнього технологічного та енергозберігаючого обладнання, підвищення ефективності діяльності підприємств, а також результати науково-дослідних робіт студентів з метою підвищення якості підготовки майбутніх фахівців харчової промисловості.

Розраховано на молодих науковців і дослідників, які займаються означеними проблемами у харчовій науці та промисловості.

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Modern Data Science technologies

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Introduction. We talk about data like it's this clean, flowing river, but anyone who actually touches it knows it's more like a flood in a basement. It's messy. It's everywhere. And honestly? Most of it is just noise.

We used to think of data science as this fancy extension of math, something for people in white coats in a lab. But look around. It wasn't some grand plan. We just reached a point where computers got fast enough to handle the sheer mountain of garbage we were generating every day. We stopped just collecting numbers and started trying to make sense of the chaos before it buried us.

Materials and methods. The real headache starts with what everyone calls Big Data. Standard databases just choke on that. So we had to get creative. We started breaking tasks apart, spreading the work across hundreds of machines. It's like trying to move a house; you don't find one giant to carry it, you get a hundred people to take a piece each. And we moved away from waiting for "reports" at the end of the month. Who has time for that?

Results and discussion. Then you have Business Intelligence, or BI. People think BI is just making pretty charts, but that misses the point entirely. If data science is the messy work of digging through the mud, BI is showing the person in the expensive suit why they should care. It's about clarity.

We've all seen those 50-page reports that nobody reads. That's the old way. We're moving away from guessing. We're moving away from "I have a gut feeling." When you put a solid BI tool in front of someone, you're giving them a map in a dark room. It's about finding that one truth in a sea of conflicting opinions.

Where is this all going? Look at your phone. Look at your car. We're moving toward "the edge." We're tired of sending everything to the cloud and waiting for it to come back. We want the processing to happen right there, on the device. It's faster, it's safer, and it just makes sense. And down the road, we have Quantum Computing looming over us. It's still mostly lab stuff for now, but if it works? Everything we know about encryption and data processing goes out the window. It's a complete reset.

This brings us to the ethics of it all, which usually gets ignored until something goes wrong. We can't just vacuum up every bit of personal info and hope for the best. And we have to be honest about bias. Machines learn from us, and we are biased. If we feed a machine a hundred years of unfair data, we shouldn't be surprised when it acts unfair. It's our job to fix that. An "intelligent" system that just repeats our worst habits isn't actually intelligent; it's just a high-tech mirror of our own flaws.

Conclusion. Data science isn't some fixed destination we're trying to reach. It's just this constant, frantic evolution. We are trying to find a balance. On one side, you have the massive, overwhelming scale of Big Data. On the other, you have the need for the simple, sharp clarity of BI. Everything in between is just us trying to build better tools to bridge that gap. We aren't just moving bits around. We're trying to figure out what happens next before it actually happens. It's a wild, messy, exhausting field, but I wouldn't want to be doing anything else. We're basically building the nervous system for the future, one line of code at a time.