

Ministry of Education and Science of Ukraine

National University of Food Technologies

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**92<sup>th</sup>**  
**International scientific conference**  
**of young scientist and students**

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

**April, 20–24 2026**

**Part 2**

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**Kyiv, NUFT, 2026**

Міністерство освіти і науки України

Національний університет харчових технологій

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**92-а**  
**Міжнародна наукова**  
**конференція молодих учених,**  
**аспірантів і студентів**

**"Наукові здобутки молоді –**  
**вирішенню проблем**  
**харчування людства у ХХІ**  
**столітті"**

**20–24 квітня 2026 р.**

**Частина 2**

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**Київ НУХТ 2026**

**92<sup>st</sup> International** scientific conference of young scientist and students "Youth scientific achievement to the 21st century nutrition problem solution", April, 20–204, 2026. Book of abstract. Part 2. NUFT, Kyiv.

The publication contains materials of 91<sup>th</sup> 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.

ISBN 978-966-612-358-2

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**Матеріали** 92-ї Міжнародної наукової конференції молодих учених, аспірантів і студентів "Наукові здобутки молоді – вирішенню проблем харчування людства у ХХІ 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 ХХІ 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.

ISBN 978-966-612-358-2

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## Prospects for using Python in modern education

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**Introduction.** People keep talking about how education needs to adapt. Mostly, they mean we should teach everyone to code. They are right. Leaving programming just to the computer science departments is a huge mistake. Coding is basic literacy now. You need it just as much as you need to know how to read a spreadsheet or write an essay. Python sits right at the center of all this. It helps students from any background figure out complex problems. It automates the boring, repetitive parts of their research. It gets them ready for a job market that runs entirely on data. Python is easy to read. It has a massive community behind it. Because of that, it stops being some scary technical hurdle. It becomes a standard, everyday tool for academic work. I watched this shift happen firsthand at the National University of Food Technologies (NUFT) in Kyiv. It completely changed how we handle our labs and our research.

Try learning Java or C++ as your very first programming language. It is brutal. You spend days fighting with missing semicolons, strict type declarations, and weird memory rules. Python is different. You focus purely on your idea. This changes the whole vibe in a classroom. Teachers can actually teach logic. They can show students how to break a big problem apart into smaller pieces. Programming becomes helpful instead of frustrating.

**Materials and methods.** Python ignores the usual walls between university departments. Data is everywhere. A sociology major wants to scrape thousands of tweets to see how people feel about a news event. A physics major needs to model heat transfer through different metals. They both use Python. The open-source community built tools for absolutely everything. You have Pandas for chopping up big data tables. You have Matplotlib for drawing colorful charts. You have SciPy for the heavy math. Students basically get a free, professional-grade research lab right on their laptops. Bringing these tools into normal, non-tech classes gives students a sandbox. They can pull in real-world numbers and see what they find on their own.

**Results and discussion.** Modern food factories are highly automated. You need precise control systems to run a modern dairy or a large commercial bakery. We used Python to bring this industrial reality right to our screens. We used simulation libraries and created virtual heat exchangers and evaporators. Work was done on simulating the process of sugar evaporation. We wanted to optimize the evaporation time and temperature. We entered the initial moisture content and volume of the sugar syrup into the script. We could increase the evaporator temperature by five degrees in the code and instantly see what happened to the quality of the sugar syrup. We didn't waste any raw materials or energy resources. This allowed us to get immediate feedback. Working with such a simulation is much better than reading a static section of a textbook. You get a real sense of how factory machines actually behave.

**Conclusion.** Right now, knowing how to handle data with code is a basic requirement. It is not some special bonus skill. Universities need to put tools like Python into every major. That is how you get graduates who actually understand their field deeply. My time at the National University of Food Technologies proved this to me. We wrote code to speed up our lab work. We simulated bakery ovens. We built our own basic quality-control cameras. We graduated knowing how food is made, and we also knew exactly how to improve the process using data. Python takes abstract textbook theories and turns them into something you can run, break, and fix with your own hands.