ChSTU's Learning Materials Preparation Progress

Partner presentation

Serhii Holub, Vadym Oleksiuk

Planery meeting | 15/11/2024| Bratislava

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CHERKASY STATE TECHNOLOGICAL UNIVERSITY

EUROPE-VECTORED EDUCATION

List of Developed Courses

Digital Technologies

- 107 - Data science

Soft Skills and Digital Ethics

- 204 - Digital ethics

- 205 - Transversality and integrity

Mental Health

- 301 - Mental well-being in terms of digitalization

The Team of Software for Automated Systems Department

NEXT

Data Science

Learning object type	Number of learning objects	Requirements	Progress
pages of text (1800 characters / 1 page)	37	30	**100%**
images and tables	20	25	**80%**
videos (2–5 minutes)	13	10	**100%**
interactive / advanced elements	16	15	**100%**
worksheets	2	2	**100%**
self-test questions	56	50	**100%**
links to external resources (for creating the mind map)	13	10	**100%**

NEXT

Data science

Teaching students of non-IT specialties has its own specificity:
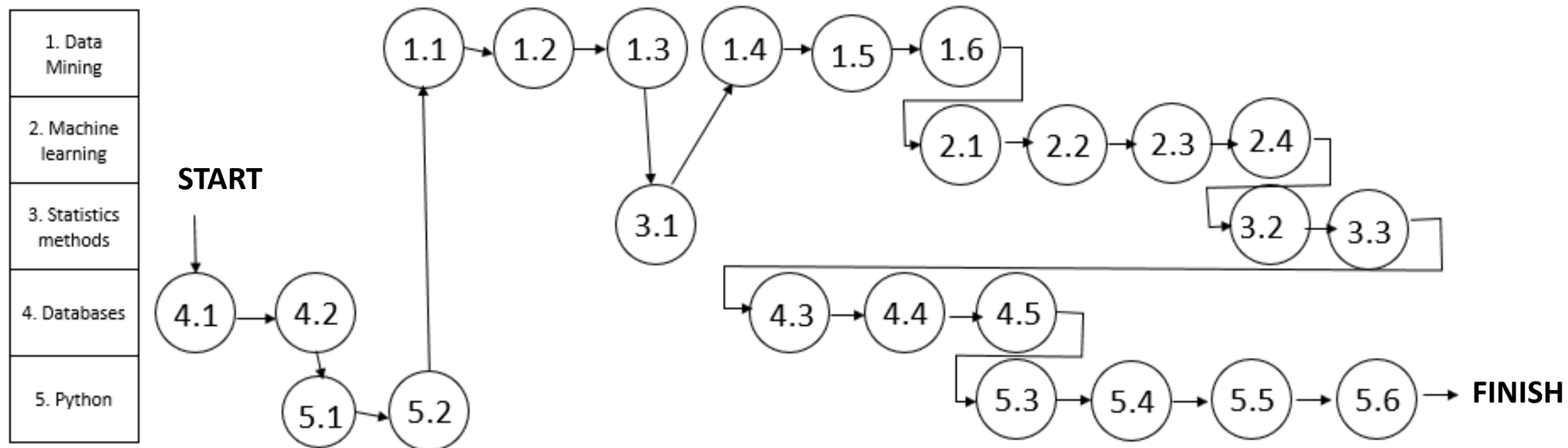
"Introduction

Dear reader, when processing data, in most cases, a certain typical sequence of steps is sufficient. It's simple. It's not difficult. We'll teach you.

To make your work easier, you need to learn how to use existing data processing tools. For this, at the start of each task—tasks you'll be paid for—it's essential to identify how it resembles already established problem types.

For solving common tasks, there are already developed computer programs. You'll need to learn how to use these programs. We will teach you to create databases (DB) for these tables (DB) and use the Python programming language to access the necessary tools to automate the processing of observational results."

	Data Mining		Machine learning		Statistics methods		Databases		Python
1.1	Formulating Typical Data Science Tasks	2.1	Introduction to Machine Learning. Machine Learning as part of Data Science. Machine Learning structure	3.1	Statistical processing of observation results. Evaluation of the suitability of models for use	4.1	The concept of a database and a database management system	5.1	Basics of Python for Data Science
1.2	Forming a Data Array for Data Science Tasks	2.2	Classical Machine Learning: learning with a teacher and without a teacher. Reinforcement learning	3.2	Statistical models. The method of least squares	4.2	The relationship between the relational model and database elements	5.2	NumPy
1.3	Functional and structural description of Data Mining technology	2.3	Tools of machine learning for models. Neural networks.	3.3	Time series analysis	4.3	Relational databases	5.3	Statistical work on Python with Pandas
1.4	Models of Data Science Tasks and Their Evaluation	2.4	Application of machine learning technologies in everyday life			4.4	SQL queries	5.4	Visualization of data in Python (Matplotlib)
1.5	Practical Implementation: Intelligent Monitoring Technology					4.5	Data warehouses for Data Mining technology	5.5	ML with TensorFlow
1.6	Using Python (with Scikit-learn, NumPy, and Pandas libraries)							5.6	ML with PyTorch

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Nataliia Khymytsia

PhD,
Lviv Polytechnic
National University

204. Digital ethics

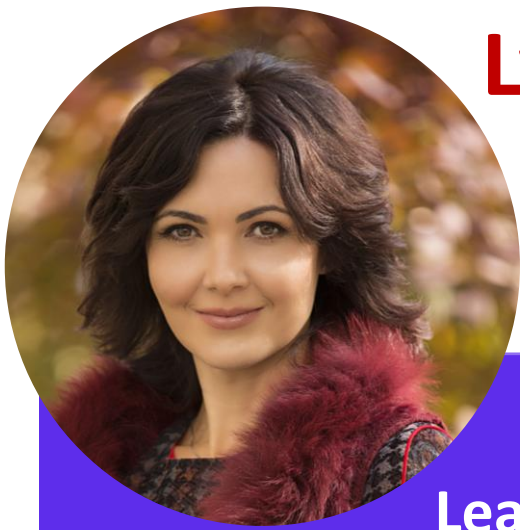| Learning object type	Number of learning objects	Requirements	Progress
pages of text (1800 characters / 1 page)	10	10	100%
images and tables	10	10	100%
videos (4–6 minutes)	3	3	100%
interactive / advanced elements	4	4	100%
worksheets	2	2	100%
self-test questions	10	10	100%
links to external resources (for creating the mind map)	6	6	100%

Angela Boyko

Prof., Head of Philosophy Department at ChSTU

205. Transversality and Integrity

Learning object type	Number of learning objects	Requirements	Progress
pages of text (1800 characters / 1 page)	5	5	**100%**
images / graphs / tables	2	2	**100%**
videos / audios / animations (2–7 minutes)	2	2	**100%**
interactive / advanced elements	2	2	**100%**
worksheets	2	2	**100%**
self-test questions	5	5	**100%**
links to external resources (for creating the mind map)	2	2	**100%**

Lyudmyla Vovkochyn

PhD, Associate Professor at Psychology Department at ChSTU

301. Mental well-being in terms of digitalization

Learning object type	Number of learning objects	Requirements	Progress
pages of text (1800 characters / 1 page)	17	17	100%
images and tables	5	5	100%
videos (2–5 minutes)	2	2	100%
interactive / advanced elements	3	3	100%
worksheets	2	2	100%
self-test questions	10	10	100%
links to external resources (for creating the mind map)	2	2	100%

Practical aspects of digital detox, reboot methods, technologies for promoting mental health

For maximum effectiveness, it's recommended to combine digital methods with traditional approaches to mental health support, such as physical activity, social interaction in real life, and professional psychological help when necessary.

Further research in this field will help to better understand the long-term effects of using digital technologies for mental health and develop even more effective strategies for their application. Pictures shows examples of computer gamification of balance boards.
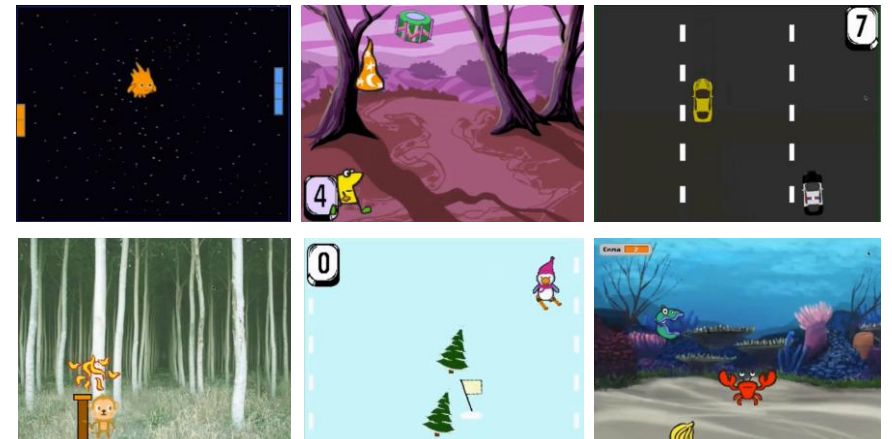
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Thank you for your attention!