



National Technical University
"Kharkiv Polytechnic Institute"

**DEPARTMENT OF SOFTWARE
ENGINEERING AND
MANAGEMENT INTELLIGENT
TECHNOLOGIES**



FROM DEVELOPING SOFTWARE FOR ON-BOARD COMPUTERS TO SOFTWARE FOR LARGE IT COMPANIES!

Department «Software engineering and intelligent management technologies» (formerly the department «Automated control systems», «Software engineering and management information technology») successfully **has been providing educational services for 60 years** — in 2024 the department celebrates its anniversary.

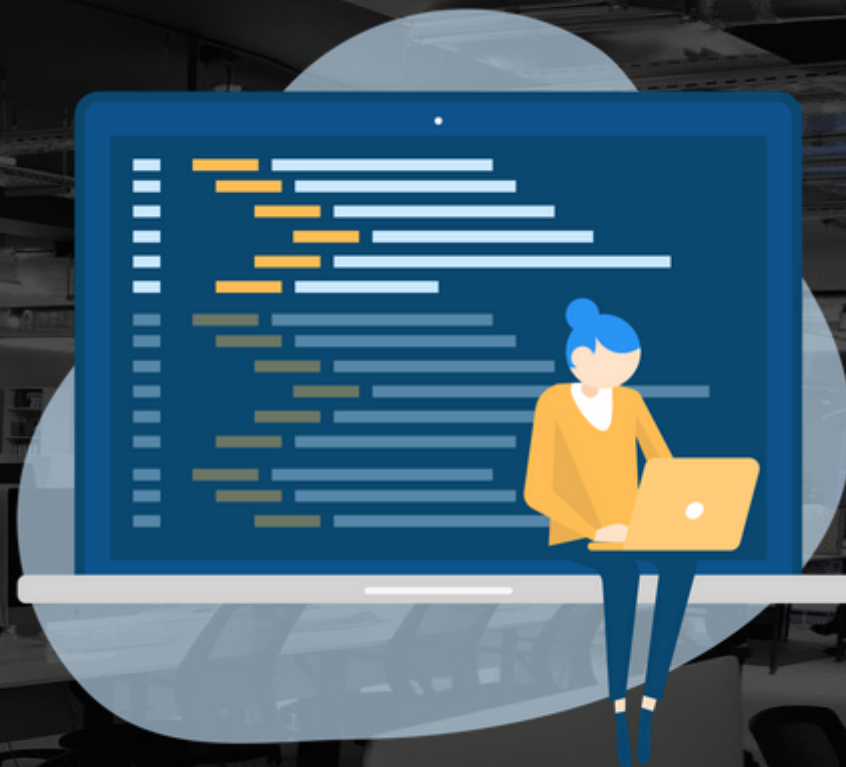
The main goal of the department has always been **fundamental training of specialists in the field of information technology**. This approach was founded in the 60s and 70s of the last century and fully justified itself in the following years. Many of the department's graduates have become well-known scientists, university professors, heads of large enterprises and organizations, and have achieved significant success in business.





Study Program (121) Software Engineering

Specialization in software design,
development, construction and testing,
including intelligent systems



CAREER PATHS

Software Engineer | Software Testing | Software QA Engineer | Software Architect
System Architect | Business Analyst | Software Systems Analyst | IT Project Manager
Artificial Intelligence Engineer | Machine Learning Engineer | Cloud Engineer



Study Program (122) Computer Science and Intelligent Systems

Specialization in software development of
intelligent systems, artificial intelligence
technologies, data processing and analysis



CAREER PATHS

Software Engineer | Data Analyst | Data Scientist | Artificial Intelligence Engineer
Machine Learning Engineer | Business Analyst | IT Systems Analyst | IT Project Manager
Software Architect | AI & ML Researcher | Data Engineer



**Bachelor's degree programs
121 «Software Engineering»
and 122 «Computer Science
and Intelligent Systems»
successfully passed the
procedure international
accreditation from the
German Central Agency for
Evaluation and
Accreditation (ZEvA) and
received the corresponding
certificates valid until 2030!**





DEPARTMENT OF SOFTWARE ENGINEERING AND MANAGEMENT INTELLIGENT TECHNOLOGIES

- 💡 Innovation Campus
- 💡 Applied Artificial Intelligence
- 💡 Artificial Intelligence & Cybersecurity
- 💡 Software Development & Startup





INNOVATION CAMPUS

- Databases and data warehouses
- Fullstack development of web systems
- Distributed databases
- Leadership and strategic management in IT
- Project workshop
- Formation and development of IT project teams



Peer-to-peer



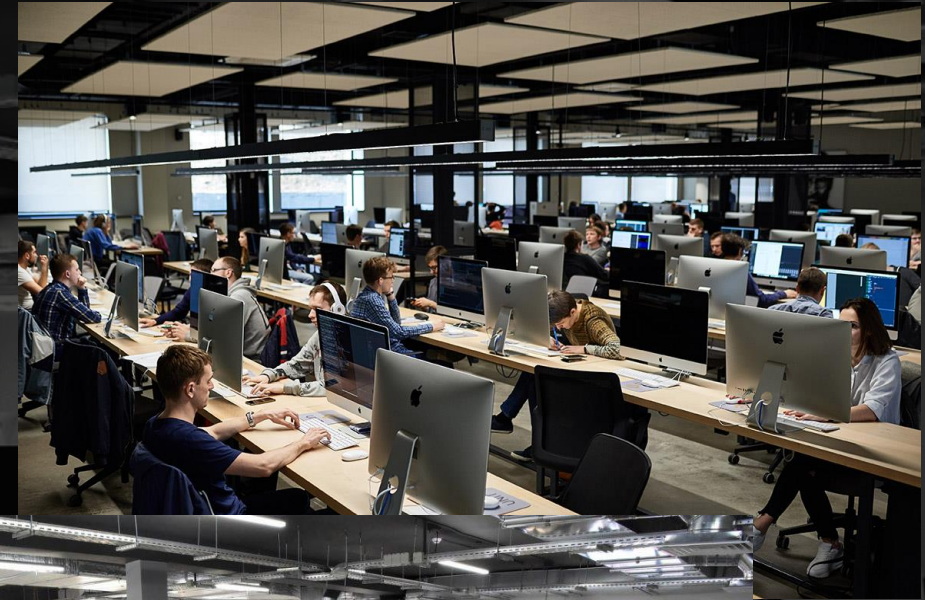
Gamification



Project-based learning



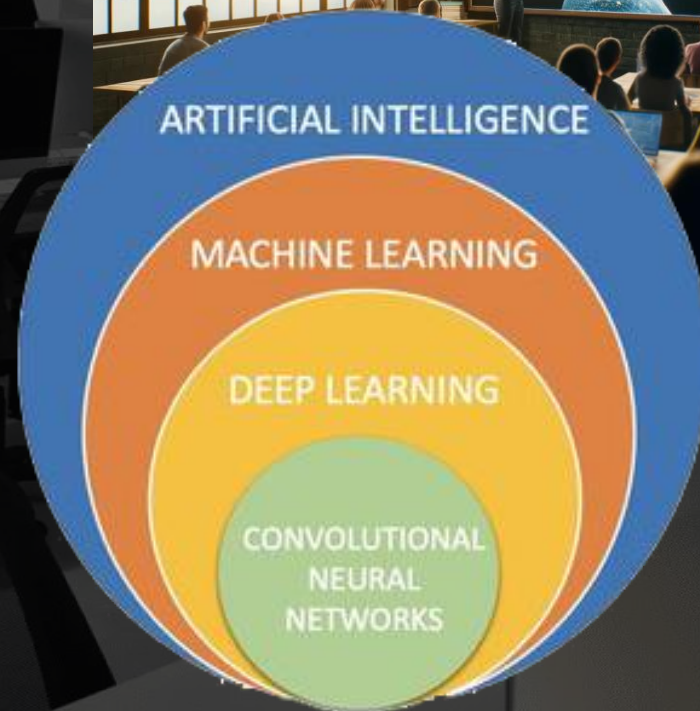
Personal learning track





APPLIED ARTIFICIAL INTELLIGENCE

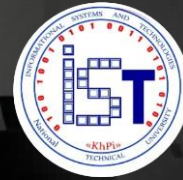
- Python basics for Data Science
- Artificial Intelligence with Python
- Applied text processing and Text Mining in Python
- Image Processing and Computer Vision in Python
- Applied tasks of deep learning in Python
- Developing intelligent chatbots with Python





ARTIFICIAL INTELLIGENCE & CYBERSECURITY

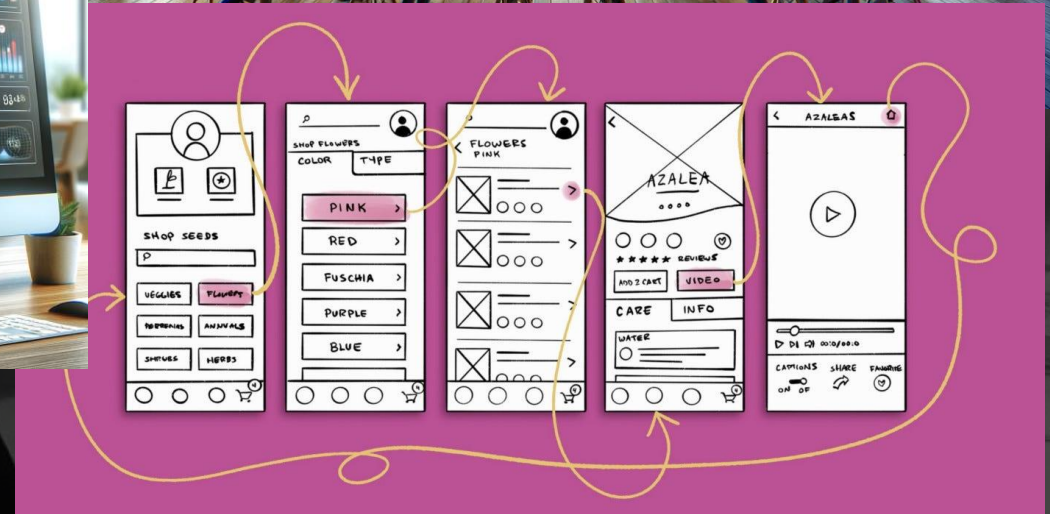
- Python basics for AI
- Ethical hacking
- Cybersecurity risk management
- Fundamentals of AI and cybersecurity
- Protecting and attacking data with
- Network security and AI





SOFTWARE DEVELOPMENT & STARTUP

- Fundamentals of entrepreneurship
- Business modeling
- Fundamentals of prototyping
- Business planning for a startup
- Internet marketing
- Business analytics of a startup





DEPARTMENT OF SOFTWARE ENGINEERING AND MANAGEMENT INTELLIGENT TECHNOLOGIES

- 💡 Business Intelligence Technologies
- 💡 Data Mining Tools
- 💡 Machine Learning Methods
- 💡 Innovative Solutions Design using AI
- 💡 Decentralized Systems & Blockchain
- 💡 Cloud Computing & DevOps



MASTER'S DEGREE ELECTIVE COURSES



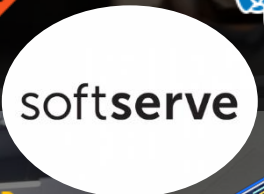


IT EDUCATION OF THE FUTURE

MODERN COMPETENCIES IN THE IT INDUSTRY



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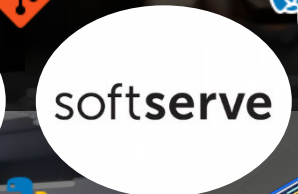
FLEXIBILITY OF TRAINING



SQL



CREATIVITY AND INNOVATION



PROFESSIONAL COMMUNICATION



DEEP KNOWLEDGE OF TECHNOLOGY



ETHICS AND RESPONSIBILITY





OPPORTUNITIES FOR STUDENTS

HIGH-QUALITY DISTANCE LEARNING WORLDWIDE!



PROFESSIONAL TEACHING STAFF



PROJECT-BASED LEARNING



EXPERIENCED ENGLISH TEACHERS



INTERNATIONAL AND JOINT PROGRAMS



LEARNING AND PRACTICE COMBINATION





OUR ACADEMIC IMPACT

RESEARCH FIELDS

- INTELLIGENT DATA MONITORING
- AGENT-DRIVEN DEVELOPMENT
- TEXTUAL DATA PROCESSING
- SOFTWARE PROCESS IMPROVEMENT
- COMPLEX SYSTEMS ANALYSIS
- DYNAMIC SYSTEMS MANAGEMENT
- PARALLEL COMPUTING
- INTEGRATED SOFTWARE TOOLS



WORKSHOPS
JOURNAL PAPERS
RESEARCH PROJECTS
INTERNATIONAL PROJECTS

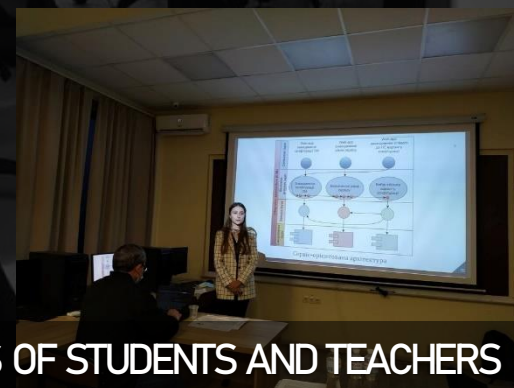
25 Teachers with B2/C1 English | **6 Full Professors** | **25 Associate Professors** | **7 Instructors**



STUDENT RESEARCH PROJECT GROUPS



INTERNATIONAL INTERNSHIPS OF STUDENTS AND TEACHERS



VISITING PROFESSORS



LET'S STAY IN TOUCH!



SOFTWARE ENGINEERING AND MANAGEMENT INTELLIGENT TECHNOLOGIES



Telegram Chatbot
@AboutSWKhPI bot

Learn about our study
programs, teachers, and
opportunities for
students and graduates!

Ukraine, 61002, Kharkiv
Kyrpychova st., 2, Building U2
7th Floor, Room 705



E-mail: piitu@kphi.edu.ua

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OUR SOCIALS

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