



ETU "LETI"
SAINT PETERSBURG ELECTROTECHNICAL UNIVERSITY

"ARTIFICIAL INTELLIGENCE TECHNOLOGIES AND ADVANCED SOFTWARE PLATFORMS FOR HIGHER EDUCATION"

Presenter: Natalya V. Razmochaeva

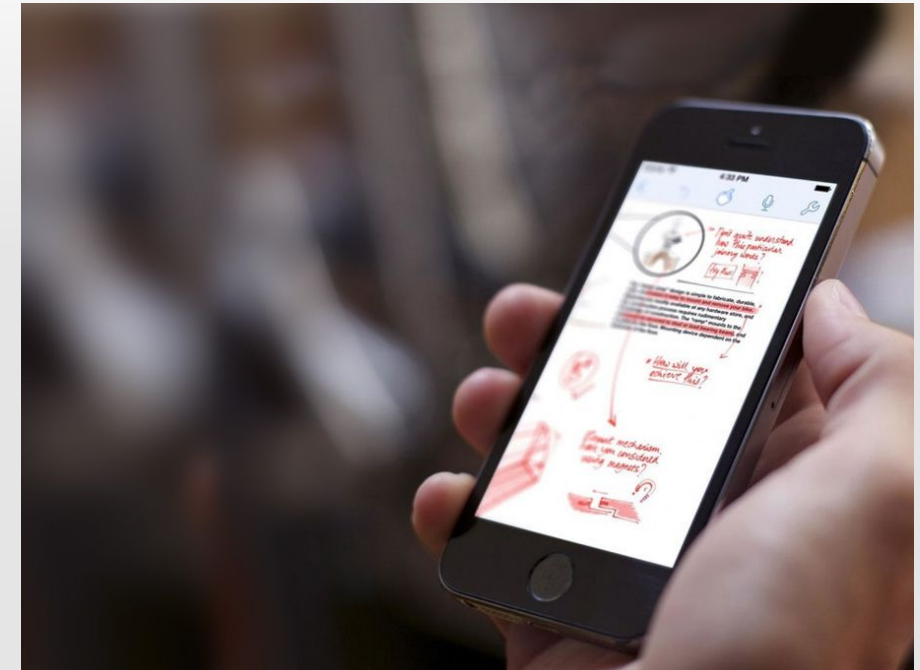
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INTRODUCTION: IT & DIGITAL ECONOMY



DESCRIPTION

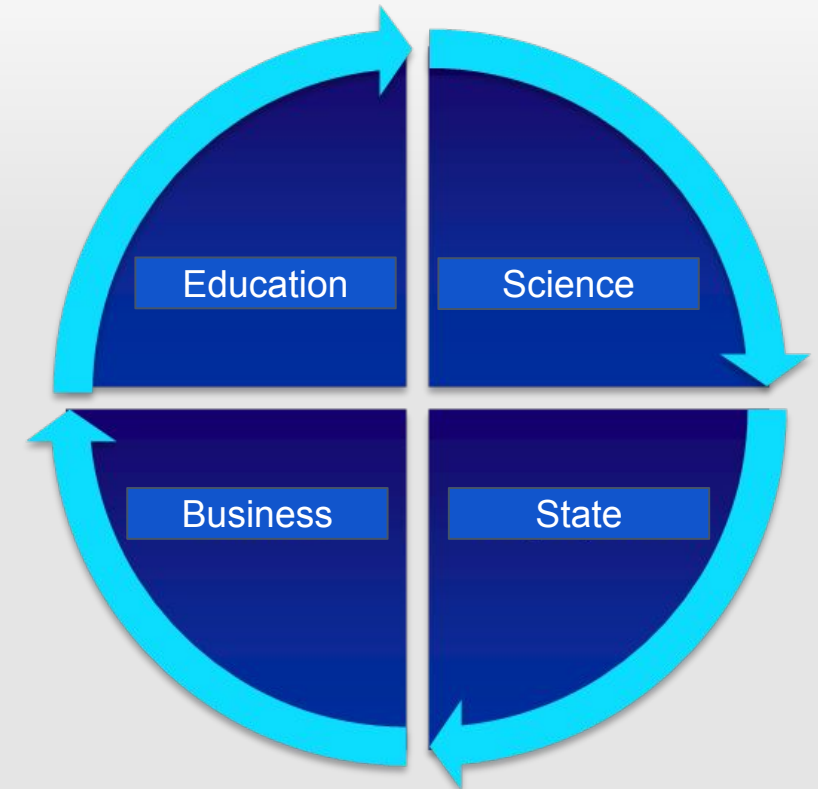
- Information Technologies and Digital Economy go hand in hand.
- Digital Economy unites all of us using information technologies.
- IT educational is very significant in modern world.
- How we can manage digital economy? Due to higher education.



DIGITAL ECONOMY IN HIGHER EDUCATION

As the result: University 4.0, Industry 4.0

1. The university is a full participant in the innovation cycle of developing new technologies and products.
2. Successful participation in solving global challenges and socially significant problems as a guarantee of competitiveness and minimization of risks.
3. International collaboration and networking with world leaders in science and education.
4. Sustainable development of the university through the capitalization of new knowledge.



ARTIFICIAL INTELLIGENCE IN DIGITAL ECONOMY ERA

POINTS:

- 1) most efficient automation tool
- 2) processing and analysis of various data, forecasting, optimization
- 3) education, banking, medicine, commerce
- 4) development of advanced software platforms and robotics



DIGITAL ECONOMY IN ETU “LETI”



POINTS:

- 1) What is ETU “LETI” contribution in digital economy?
- 2) We training our student to work in digitalization sphere using science areas like:
 - big data analysis,
 - machine learning,
 - artificial intelligence methods,
 - etc.

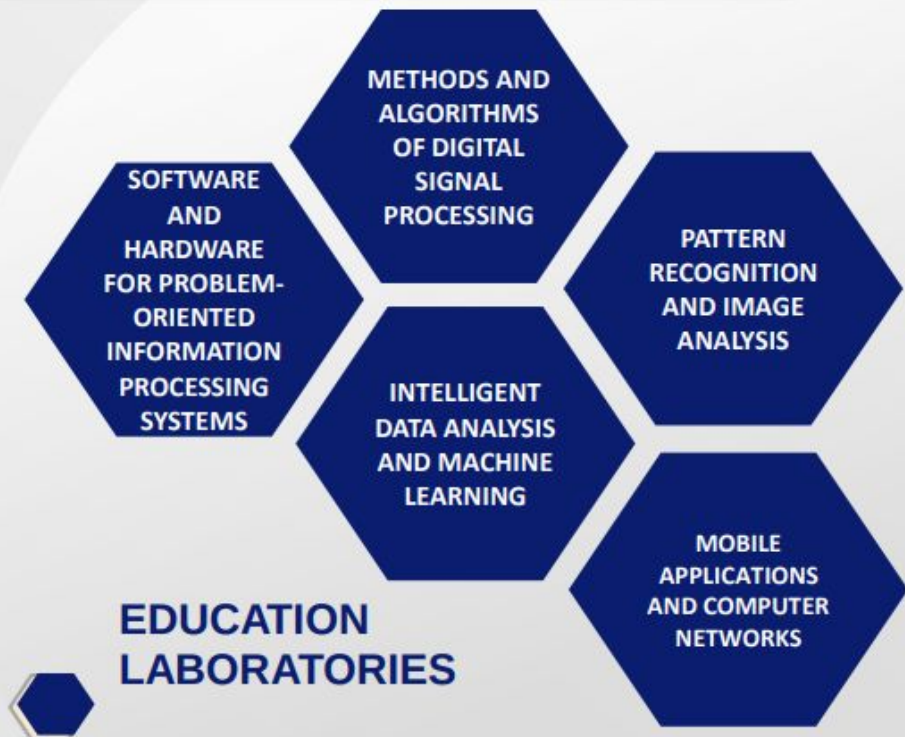
ETU “LETI” FACULTIES:

- FEL, Faculty of Radio Engineering
- FRT, Faculty of Electronics
- **FKTI, Faculty of Computer Science and Technology**
- FEM, Faculty of Economics and Management
- FEA, Faculty of Industrial Automation and Electrical Engineering
- FIBS, Faculty of Information Measurement and Biotechnical Systems

ARTIFICIAL INTELLIGENCE IN ETU “LETI”



EDUCATION & RESEARCH FACILITIES



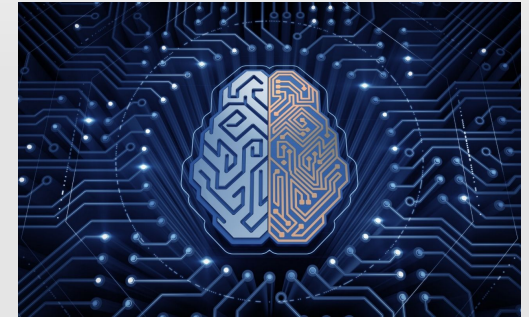
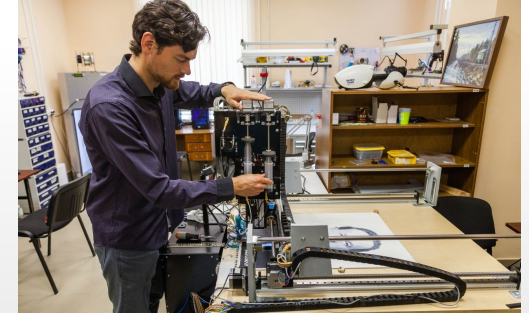
ETU “LETI” DISCIPLINES:

- 1) Digital signal and image processing
- 2) Pattern recognition and image analysis
- 3) Artificial intelligence and data mining
- 4) Data and visual analytics
- 5) Software engineering
- 6) Information security
- 7) Control theory and control processes
- 8) Computer algebra and numerical methods
- 9) Decision-making systems, optimization, and mathematical modeling
- 10) Telecommunication technologies, multimedia technologies,
- 11) web-technologies
- 12) Parallel, distributed, and embedded systems
- 13) Biometric technologies
- 14) Hardware design and verification

RESULTS IN ETU “LETI”

SCIENCE PROJECT EXAMPLES:

- Effectively monitor animal health using artificial intelligence
- Automatic Dog Age Estimation Project
- Innovative technologies for the preservation of cultural and historical heritage
- Project for the creation of high-tech industries
- Painting robot based on artificial intelligence
- Acoustic event detector based on artificial intelligence for biometric tasks
- Identifier voice fakes and ensure the security of confidential information
- and others



WAYS TO ACHIEVE RESULTS



EDUCATION PROGRAMS

Bachelors / Masters:

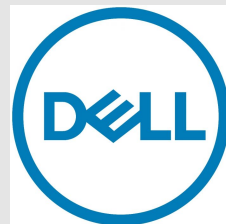
- 01.03.02 / 01.04.02 – **Applied Mathematics and Informatics**
 - The program offers modern worldwide standards in software development (IEEE SWEBOK etc.). Our students are proficient in mathematics, programming, IT, Computer systems and networks.
- 09.03.04 / 09.04.04 – **Software Engineering**
 - Training provided to students reflects evolution of programming from craft to a branch of science and industry based on three conventional concepts - techniques, tools and technologies.

Programs are provided of Department Of Software Engineering And Computer Applications (MO EVM)

DESCRIPTION OF MO EVM EDUCATIONAL PROCESSES:

- 1) training highly qualified scientific specialists
- 2) basic education plan and additional courses
- 3) modern software and hardware
- 4) laboratory for learning models and robots
- 5) international conferences and specialized schools
- 6) additional lectures of advanced and intelligent data analysis, data mining, AI, big data analysis, machine learning, expert system, decision make system

Students have the opportunity to undergo practical training and research on relevant topics and with the participation of specialists from these companies and schools:



WINTER SCHOOLS

OF RUSSIAN LANGUAGE:

PROGRAMS:

1. Russian Language and Cultural Heritage of Russia
 - a. 1 week
 - b. 36 academic hours
2. Gems of Russian Culture in Russian Language
 - a. 2 weeks
 - b. 72 academic hours

For program:

- LETU “ETU” offers different types of accommodation:
 - Hostel/Hotel
 - Student dormitory
- Programs include:
 - tuition, courseworks, cultural program



WINTER SCHOOLS

IN ENGLISH:

PROGRAMS:

1. Automation and Mechatronics
 2. Biomedical Engineering
 3. Energy Saving Electrotechniques
 4. Green Economy and Sustainable Development
 5. Heritage Science
 6. Industrial Software Engineering
 7. Intercultural Communication in Business
 8. Laser and Optical Measurements
 9. Renewable Energy
- LETU “ETU” offers different types of accommodation:
 - Hostel/Hotel
 - Student dormitory
 - Programs include:
 - tuition, courseworks, cultural program



SUMMER SCHOOLS



PROGRAMS OF RUSSIAN LANGUAGE:

August, 2020:

1. Intensive course of **Russian Language** for Beginners (**A1 level**)
 - a. 4 week
 - b. 120 academic hours
2. Intensive course of **Russian Language** Upperintermediate (**A2-B1 level**)
 - a. 4 weeks
 - b. 120 academic hours
3. Intensive course of **Russian Language** for Masters and Postgraduate Students (**B2-C1 level**)
 - a. 3-4 weeks
 - b. 80 academic hours

July, 2020:

4. Russian Language and Cultural Heritage of Russia
 - a. 1 week
 - b. 36 academic hours
5. Gems of Russian Culture in Russian Language
 - c. 2 weeks
 - d. 72 academic hours



PREPARATORY DEPARTMENT FOR INTERNATIONAL STUDENTS



BASIC TRAINING COURSES:

- 1) Technical:
 - a) Russian as Foreign Language
 - b) Mathematics
 - c) Physics
 - d) Computer Science
- 2) Economics:
 - a) Russian as Foreign Language
 - b) Mathematics
 - c) Computer Science
 - d) Social Studies
 - e) History of Russia
 - f) World Cultural History

- 3) Humanities:
 - a) Russian as Foreign Language
 - b) Literature
 - c) Social Studies
 - d) History of Russia
 - e) World Cultural History

Groups of different levels are formed annually.

An individual educational plan is drawn up for each group.

After graduating from the Preparatory Department, students have the **opportunity to enroll in bachelor's, master's or postgraduate programs.** Successfully graduated from the Preparatory Department students, who pass the entrance examinations can study at ETU "LETI".



ETU "LETI"

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SEE YOU AT SAINT PETERSBURG ELECTROTECHNICAL UNIVERSITY "LETI"

