



Topics of master's thesis
on educational program 7M06102 – «Computer science»
for 2019-2020 academic year

1. Methods for diagnosing diseases using expert systems
2. Исследование методов анализа геоданных инфраструктуры города.
3. Research of methods and technologies of pattern recognition on the example of iris of human eyes
4. Computer games in training and technologies of their development
5. Research of methods and means of access control based on face recognition analysis
6. Creation of a knowledge base of subjects of small business on the example of LLP «Center for research of entrepreneurship development»
7. Java Security Technology Platform
8. Methods and algorithms for developing a social taxi automation system
9. Research of methods and technologies of design and implementation of online training on the example of a subject course
10. Research on overload predicting methods in computer networks
11. Methods of creating user interfaces for an internal combustion engine (ICE)
12. Development of methods for representing of engineering knowledge and machine learning
13. Development of augmented reality application for demonstrating medical knowledge
14. Development of virtual reality application for demonstrating medical knowledge
15. Optimizing the horizontal scaling of databases for information systems
16. Methods of knowledge representation in the artificial intelligence system.
17. The development of an application for a virtual exam of a medical student
18. Methods of creating graphical user interfaces
19. Optimization and automation of public services
20. Research and forecasting the effectiveness of anti-plagiarism verification systems

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1. Research on methods for protecting files from external threats
2. Data Protection in the «ALARm» Traffic Monitoring System
3. Create and secure a workflow web application on a cloud platform
4. Ensuring information security using cloud services
5. Improving the methods of training specialists in the field of information security based on LabView virtualization technologies
6. Research of methods of internal audit of information security of the organization on the basis of the risk-oriented approach.
7. Investigation and protection against SQL attacks
8. Creation of machine data monitoring and analysis center based on the Splunk platform
9. Analysis of browser resilience to various attacks on personal devices
10. Analysis of methods for constructing adaptive fraudulent models of reflexive control by an attacker of promising information protection systems
11. Research of modern anti-spam technologies
12. Application of cryptographic protection methods in information systems
13. Research and development of personal data protection system in enterprises
14. methods for improving the efficiency of the security of information resources of enterprises and organizations based on DPI(Deep Packet Inspection) technologies
15. Methods and technologies of development of the systems of admittance by the retina of eye
16. Classification of information threats in social networks based on deep learning
17. Investigation of errors in the Windows operating system.
18. Analysis of efficiency of natural algorithm for cryptanalysis of some ciphers
19. Study of the security of web-resources from cyber attacks
20. Development of proposals for improving information exchange technologies between the open Internet network and a closed (secure) local area network
21. Information security methods based on its visualization
22. Development of a methodology for assessing the risks of information security of the university
23. Security of the university distance learning portal
24. Methods of implementing personal data security on different platforms
25. Statistical Analysis of Kazakh Language in Cryptanalysis Problems
26. Methods for organizing multi-level access in information systems

27. Development of a model for an information security monitoring system in a local network
28. Research of detection methods of vulnerabilities in the database
29. Organization of a secure document management system based on LOTUS DOMINO
30. Methods of ensuring information security of underage Internet users by means of filtering.
31. Interception and Control Vulnerabilities in 4G Generation Mobile Communications and Methods for Addressing Them
32. Research of software protection methods from hacking and piracy
33. Research of methods and means of DDoS-attacks detection
34. Research of security methods of a corporate network in the organization of LLP «MEDILAB»
35. Building of encrypted VPN channel between branches of «Kaztranscom» JSC
36. Versatile Apparatus for Analyzing the Security of Computer Networks and Applications Based on Android Devices
37. Development of information security thesaurus for search engines
38. Methods to ensure the safety of video materials with varying degrees of confidentiality
39. Multi-agent botnet detection and blocking system
40. Methods and technologies of creation of corporate information protection system at the enterprise
41. Malware analysis using interactive disassemblers
42. Research of methods of using artificial neural networks in information security problems
43. Creating a SaaS system for monitoring and protecting the site server from external attacks and threats
44. Development of methods implementing the methodology of risk management in object-oriented storage networks
45. Research of organizational methods and algorithms of data protection
46. Research of methods and algorithms for detecting cyberbullying in a network
47. Methods of organizing information security in enterprises
48. Practical analysis of malicious software
49. The research of information security methods in the electronic commerce system
50. Methods and technologies of password protection and differentiation of access to information
51. Risk assessment of information security in computer networks of the university
52. Improving methods for preventing information leakage on local networks of enterprises and organizations based on DLP (Data Leak Prevention) technologies
53. Investigation of information leakage in VoIP networks

54. Methods and technologies for intercepting and analyzing network traffic
55. Methodology of information security in the Internet of Things
56. Development of rules for the information security system for preventing insider's attacks risks
57. Transformation of images into acoustic vibration in order to protect information during transmission
58. Visualization of voice messages in order to improve the quality of speech recognition in noise conditions
59. A study of methods for verifying drivers for the Linux operating system
60. Network analysis of logs for web application

Considered at the meeting of the department of Computer science and information security. Protocol №2 of 18.10.2019.

**Head of the department
of Computer science and information security**



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