

## International Competition of Student Scientific Works “Black Sea Science 2021”

### 1<sup>st</sup> stage results for the field of “Information Technologies, Automation and Robotics”

Country	Institution	Work Title	Author(s)	Supervisor(s)	Score
Belarus	United Institute of Informatics Problems of the National Academy of Sciences of Belarus	Computerized diagnosis of prostate cancer based on whole slide histology images and deep learning methods	Malyshev Valery, Voynov Dmitry, Lapo Elizabeth	Kovalev Vassili	<b>89,0</b>
Poland	Lodz University of Technology	FriML - Music generation using machine learning	Kania Wiktor, Groblewski Mateusz, KłapcińskaEwa	Duch Piotr, Jaworski Tomasz	<b>86,0</b>
Ukraine	National Aerospace University – Kharkiv Aviation Institute	Visualization of the flight of unmanned aerial vehicles according to the "master - slave" model	Pyvovar Mariia	Kritskiy Dmitriy, Pogudina Olga	<b>79,0</b>
Ukraine	Odessa National Polytechnic University	Information Technology of the Diagnostics of Neuro-Physiological States of Personality based on the Volterra Models and Eye- tracking Data	Makarov Valeriy, Chorniy Volodymyr, Broska Dmitro	Pavlenko Vitaliy	<b>78,0</b>
Ukraine	Donbass State Engineering Academy	Information system for assessing the physical condition of pets	Nosulya Elizar	Nechvoloda Liudmyla	<b>77,7</b>
Ukraine	Odessa National Academy of Food Technologies	Research of traffic characteristics in multiservice networks	Bondar Dmytro, Levytskyi Bohdan	Kniazieva Nina	<b>77,5</b>
Ukraine	Petro Mohyla Black Sea State University	Passive acoustic location information system with spatial placement of sensors in the vertices of platonic polyhedrons	Vynar Anastasiia, Sorovetskyi Anton	Kulakovska Inessa, Dvoretzkyi Mykhailo	<b>77,5</b>
Ukraine	Kharkiv National Automobile and Highway University	Measuring system to monitor strain of bridge, overpass components and bridge clearance	Okushko Oleksandr	Levterov Andrii	<b>77,0</b>
Belarus	Belarusian State Academy of Communications	Information support for monitoring the parameters of a self-organizing mobile data network	Omelyanec Andrey, Pochenchuk Sergey, Margolin Sergey	Duinova Yuliya	<b>76,7</b>

Bulgaria	Technical University of Varna	Lighting system control for everyday and therapeutic purposes	Mashkov Viktor	Petkova Yulka	<b>76,7</b>
Belarus	Belarusian State University of Informatics and Radioelectronics	Principles of creating a decision-making system for a radiologist-mammologist	Efimova Aleksandra	Kayeshko Aliaxey	<b>76,0</b>
Ukraine	Odessa National Academy of Food Technologies	Research of online ide and analysis of directions of development	Bartkova Svetlana	Antonova Alfiia	<b>75,5</b>
Pakistan	National University of Computer and Emerging Sciences	Hiring assistant for recruiter	Abdullah Zafar, Umer Zahoor, Mueez Afzal	Danish Shehzad, Khubaib Amjad Alam	<b>75,5</b>
Ukraine	National Technical University "Kharkiv Polytechnic Institute"	Construction of control systems of flow parametres of the smart conveyor using a neural network	Sytnikova Anastasiya	Pihnastyi Oleh	<b>75,0</b>
Belarus	Belarusian National Technical University	Modernization of the control system of the abrasive stone cutting machine with a reinforced rope	Krasneuski Dzianis, Shaban Lizaveta, Sushko Hanna	Svistun Alexander, Pantsialeyeu Kanstantsin	<b>75,0</b>
Ukraine	Odessa Technical Vocational College of Odessa National Academy of Food Technologies	Telegram bot Student assistant	Vodopian Vitaliy	Kryvchenko Anastasiia	<b>75,0</b>
Ukraine	Cherkasy State Technological University	Development of automatic contactless ultrasound method of soil density analysis	Moroz Andriy	Filimonov Sergiy	<b>75,0</b>
Ukraine	Donbass State Engineering Academy	Use of neural networks to maximize the effectiveness of Shot putters training	Kadatskyi Mykyta	Melnykov Oleksandr	<b>74,5</b>
Ukraine	Odessa National Polytechnic University	Kinematic analysis of the hinge-lever mechanism of the gripping device anthropomorphic robot	Borysov Vladyslav	Mykhaylov Yevgen, Kniukh Oleksandr	<b>74,0</b>
Ukraine	Donbass State Engineering Academy	Decision support system for calculating the optimal provision of residents of small towns with drinking water in extreme cases	Zakabula Oleksij	Melnykov Oleksandr	<b>73,5</b>
Ukraine	Lviv Polytechnic National University	System of automated detection of ceramic disc surface defects	Bohdan Konechnyi	Maksym Semenchenko, Roman Velgan	<b>73,0</b>

Ukraine	National Technical University "Kharkiv Polytechnic Institute"	Research application of the spam filtering algorithm on social media	Oliinyk Vasyl	Podorozhniak Andrii, Liubchenko Nataliia	<b>73,0</b>
Ukraine	Kyiv National University of Trade and Economics	Information and technological restart of the hotel and restaurant business in post COVID-19 conditions	Ustymenko Sofiia, Balko Viacheslav	Tkachuk Tetiana	<b>73,0</b>
Ukraine	Academician Stepan Demianchuk International University of Economics and Humanities	Application of the method of gradual formation of sets of admissible values for solving combinatorial optimization problems	Mushyn Mariia	Shportko Olexandr	<b>73,0</b>
Ukraine	O.M. Beketov National University of Urban Economy in Kharkiv	Interactive entertainment application generation system	Pisariiev Dmytro	Bulaienko Maryna	<b>72,8</b>
Ukraine	Mariupol State University	Researching the system for vulnerability to mitm attacks by creating Fake AP	Karpenko Ulyana, Chebanenko Igor	Krivenko Serhii	<b>71,5</b>
Ukraine	Yuriy Fedkovych Chernivtsi National University	Image classification of the food products	Viniarchyk Oleh	Malyk Ihor	<b>71,3</b>
Ukraine	H.S. Skovoroda Kharkiv National Pedagogical University	Development of electronic application for rendering of Bezier curves	Kurhanskyi Andrii	Olefrenko Nadiia	<b>71,0</b>
Kazakhstan	Zhangir khan West Kazakhstan Agrarian Technical University	Environment for teaching children the Kazakh alphabet	Sagingaliev Rinat	Zhahiena Aizat, Bazabayeva Ainur	<b>70,5</b>
Ukraine	Donbass State Engineering Academy	Investigation of the influence of external factors on the potential performance of a person at the computer and his brain activity	Marchuk Aleksandr, Davydov Yaroslav	Vasylieva Liudmyla, Staskevych Ihor	<b>70,0</b>
Belarus	Belarusian National Technical University	The modernization of the information measuring system of positioning of the optical grinding machine	Cherniak Ann, Matveencko Vladislav	Isaev Alexander, Sukhodolov Yury	<b>69,0</b>
Belarus	Belarusian State University	Simulation of motion of an unmanned aerial vehicle for measuring purposes and prototyping of its kinematic diagram	Oh Suchan	Leshkevich Sergey	<b>69,0</b>
Moldova	Technical University of Moldova	It solution regarding to the implementation of the EU GDPR	Aurelian Gore, Postu Ivan	Bulai Rodica	<b>68,5</b>

Ukraine	Vinnitsia Institute of Trade and Economics of Kyiv National University of Trade and Economics	Development of electronic payment systems and security of their functioning	Severenchuk Anna	Polovenko Lyudmyla	<b>68,0</b>
Moldova	Technical University of Moldova	DronesC - a tool for drones design using genetic algorithms	Vopilov Alexandr	Sudacevschi Viorica	<b>67,0</b>
Ukraine	National Aerospace University M. E. Zhukovsky Kharkiv Aviation Institute	Development of a milling machine with computer numerical control	Shevchenko Serhii	Kochuk Serhii	<b>67,0</b>
Ukraine	Professional College of Industrial Automation and Information Technology of Odessa National Academy of Food Technologies	Analysis of lip-sync technologies and possible ways to improve them	Pohorieltsev Pavlo, Isaiko Svitlana	Muntian Iryna	<b>67,0</b>
Ukraine	Yuriy Fedkovych Chernivtsi National University	Guitar Tuner for Android OS	Andriichuk Andrii	Lazoryk Vasyl	<b>67,0</b>
Ukraine	College of Oil and Gas Technology, Engineering and Service Infrastructure of Odessa National Academy of Food Technologies	Application of ARDUINO microcontroller system in the educational process.	Yakovleva Katerina	Volchkov Igor	<b>66,7</b>
Kazakhstan	Al-Farabi Kazakh National University	Implementation of image processing and output using digital filters using FPGA	Mukhanbet Aksultan Aituaruly	Nurakhov Edil Sergazievich, Imankulov Timur Sakenovich	<b>66,5</b>
Ukraine	Odessa National Academy of Food Technologies	Victory Manipulator Universal Robots in the line sorting of finished products of the wine industry	Kotsur Igor	Honhalo Volodymyr	<b>66,5</b>
Ukraine	National Aerospace University – Kharkiv Aviation Institute	Analysis of mixtures at laser surfacing using computer vision	Kovalevskyi Mykhailo	Kritskiy Dmitriy	<b>66,0</b>
Belarus	Belarusian National Technical University	Automatic nail transfer to the IMM zone system	Unarava Natallia, Pronchack Aleksey	Tyavlovsky Andrey, Isaev Aleksander	<b>65,5</b>
Belarus	Belarusian State University of Informatics and Radioelectronics	The system of photo, video recording of the railway wagon weighing process	Dubitskaya Karalina, Bondar Katsiaryna	Dzemenkavets Dzianis	<b>65,0</b>

Bulgaria	University of Food Technologies	Application of image processing with multilevel thresholding for mould detection on blue cheese cut surface	Ivanov Ivaylo, Karparov Vladimir, Kutryanska Magdalina	Bosakova-Ardenska Atanaska, Panayotov Peter	<b>64,0</b>
North Macedonia	St. Cyril and Methodius University in Skopje	Artificial Intelligence	Cvetanov Aleksandar		<b>64,0</b>
Ukraine	Vinnitsia Mykhailo Kotsiubynskiy State Pedagogical University	Information and communication technologies as a means of organizing training of future technical specialists	Tsarenko Dmytro, Greenberg Oleksandra	Umanets Volodymyr, Shevchenko Liudmyla	<b>63,3</b>
Bulgaria	Technical University of Gabrovo	Hall elements study with microprocessor system	Mironova Gergana	Goranov Goran	<b>63,3</b>
Belarus	Belarusian State University	Development of a recommendation system	Runets Valeryia	Sakovich Vadzim	<b>63,0</b>
Ukraine	National Aviation University	Organization of international cargo delivery in a digital economy	Arkhangelska Yelyzaveta	Katerna Olga	<b>63,0</b>
Ukraine	Pavlo Tychyna Uman State Pedagogical University	ATDH-Remote	Khytruk Yevhenii, Didenko Roman, Rozhanskyi Andrii	Makhometa Tetiana, Tiahai Ivan	<b>62,5</b>
Ukraine	Yuriy Fedkovych Chernivtsi National University	Young's Problem and its application	Kulesh Oleksandr	Rusnak Mykola	<b>62,5</b>
Ukraine	Odessa National Academy of Food Technologies	Automation of positioning of pneumatic actuators by means of introduction of the Phoenix Contact controller	Makletsky Dmytro	Kovtun Serhii	<b>61,5</b>
Belarus	Belarus State Economic University	Cryptocurrency as element of digital economy	Pashkevich Dzmitry	Dudko Ekaterina	<b>60,0</b>
Bulgaria	Konstantin Preslavsky University of Shumen	Modern SSDS: a high-tech solution to the obsolete HDD systems	Konstantinova Ekaterina	Tsankov Tsvetoslav	<b>59,5</b>
Belarus	Belarus State Economic University	Digital path of industrial development in the Republic of Belarus	Stoma Nina	Dovydova Olga	<b>59,0</b>
Ukraine	Professional College of Industrial Automation and Information Technology of Odessa National Academy of Food Technologies	Cybersecurity as a method of combating unauthorized influence in the field of information security	Burykin Ilia	Muntian Iryna	<b>58,7</b>

Ukraine	H.S. Skovoroda Kharkiv National Pedagogical University	Mobile study application Informatics of schoolchildren	Cherednichenko Sofiia	Shakurov Yevhen	<b>58,5</b>
Ukraine	Kryvyi Rih National University	Monitoring and managing system of microclimate indicators in educational	Viesielovskyi Danylo, Ivashchenko Oleksii	Ischenko Mykola	<b>57,5</b>
Ukraine	Odessa National Academy of Food Technologies	Robotic packaging system Products from primary to secondary packaging	Sidorov Vladislav	Kovtun Serhii	<b>55,0</b>
Belarus	Belarusian State Academy of Communications	Information and analytical resource of the scientific journal "Problems of infocommunications"	Lazuta Leonid	Ryabychina Olga	<b>54,7</b>
Bulgaria	Konstantin Preslavsky University of Shumen	Use of K-nearest neighbour method in analysis of student data from surveys	Konstantinova Ekaterina, Kalchev Kamen	Tsankov Tsvetoslav	<b>54,0</b>
Ukraine	Odessa National Academy of Food Technologies	Complex system of AI interactions in social simulation of a city infrastructure	Sabirov Ildar	Olshevska Olga	<b>53,5</b>
Ukraine	National Technical University "Kharkiv Polytechnic Institute"	Prospects of intelligent automation in software testing process	Bilovus Anna		<b>53,0</b>
Kazakhstan	Ekibastuz Technical and Engineering Institute Named after the Academician K. Satpayev	Study of methods of setting the automatic control system of industrial control systems	Timakov Gennady, Idrisov Marat	Seitkanovich Sabriden	<b>52,7</b>
Ukraine	College of Oil and Gas Technology, Engineering and Service Infrastructure of Odessa National Academy of Food Technologies	Portable weather station on a microcontroller	Bosenko Liliya	Volchkov Igor	<b>52,5</b>
Ukraine	Lviv Polytechnic National University	Education Capsules Project	Syrotynskyi Yurii-Ihor	Lytvyn Vasyl	<b>52,0</b>
Kazakhstan	Ekibastuz Technical and Engineering Institute Named after the Academician K. Satpayev	Research of the LOGO! microcontroller programming system	Idrisov Marat	Seitkanovich Sabriden	<b>45,5</b>
Kazakhstan	Ekibastuz Technical and Engineering Institute Named after the Academician K. Satpayev	Output of data of mechanical control systems for thermal movements of steam pipelines operating at thermal power plants into a digital APCS system	Abykenova Zarema, Idrisov Marat	Seitkanovich Sabriden	<b>40,0</b>