MINISTRY OF EDUCATION OF THE REPUBLIC OF BELARUS

BELARUSIAN STATE UNIVERSITY

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|  |  | **APPROVE** |
|  |  | **Vice-Rector** |
|  |  | for Academic Affairs and  Educational Innovations |
|  |  | Alesia G. Prakharenka |
|  |  | *(signature; initials, surname)* |
|  |  | «\_\_\_\_\_» \_\_\_\_\_\_\_\_\_\_\_\_ 2024 yr. |

**Individual Work Plan of Master Student**

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| **Name** | Chen Qi Chen | | | | | | | | | | | | | |
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| **Form of Education** | Full-time | | | | | | | | | | | | | |
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| **Faculty** | Mechanics and Mathematics Faculty | | | | | | | | | | | | | |
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| **Department** |  | | | | | | | | | | | | | |
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| **Speciality** | 7-06-0533-04 Mathematics and Computer Science | | | | | | | | | | | | | |
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| **Profiling** | Web Development and Internet Technologies | | | | | | | | | | | | | |
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| **Training period** | 2 years | | | | | | | | | | | | | |
| **Period of Study** | с | « | 01 | » | 09 |  | 2024 | по | « | 30 | » | 06 |  | 2026 |
|  |  | | | | | | | | | | | | | |
| **Research Direction** |  | | | | | | | | | | | | | |
| *(indicating the date* | (12.09.2024 №4) | | | | | | | | | | | | | |
| *order number)* |  | | | | | | | | | | | | | |
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| **Supervisor** | A.A. Deryushev | | | | | | | | | | | | | |
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|  | *(surname, initials; academic degree and title, place of work and position)* | | | | | | | | | | | | | |
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**Informed:**

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(*student’s signature*) (*initials, surname*)

«\_\_\_\_\_\_» \_\_\_\_\_\_\_\_\_\_\_\_\_\_ 20\_\_\_\_

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| **Topic of Master’s Thesis** |  |
| Neural networks in mobile applications | |
| Нейронные сети в мобильных приложениях | |
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The topic of the master's thesis and supervisor were discussed and agreed upon at the department of Web technologies and computer modeling meeting

*(specify the department)*

Protocol of «14» October 2024 № 2.

Master's thesis topic and supervisor are approved by the order of BSU Rector from «\_\_\_\_» \_\_\_\_\_\_\_\_ 20\_\_\_ № \_\_\_\_\_\_\_\_\_\_\_.

1. **Master's thesis preparation program**

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| **1.1 Justification of the topic of the master's thesis** | | | | | |
| ***Relevance of the topic of the master's thesis*** | | | | |  |
| The topic of the master's thesis is relevant, since modern mobile phones enough computing power to | | | | | |
| use neural networks This allows computing to be moved from the cloud directly to the mobile | | | | | |
| device itself, significantly reducing costs. However, many aspects of such use, especially training | | | | | |
| neural networks, require further study. | | | | | |
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| ***Purpose of the work*** | | The aim of the work is to develop approaches for the implementation of | | | |
| neural networks in typical mobile applications. | | | | | |
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| ***Objectives of the envisaged study*** | | | |  | |
| 1. Analysis of existing technologies for implementing neural networks in mobile applications. | | | | | |
| 2. Analysis of existing technologies for training neural networks. | | | | | |
| 3. Development of approaches for using neural networks in mobile applications. | | | | | |
| 4. Practical implementation of mobile applications. | | | | | |
| 5. Testing and approbation of mobile applications. | | | | | |
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| ***Essence and methodology of the study*** | | | Methods of comparative analysis, structural and | | |
| parametric synthesis, and natural modeling will be used. | | | | | |
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| ***Other information*** |  | | | | |
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**1.2 List of activities for the implementation of research work**

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| **The content of the questions,**  **to be addressed in the course of the study** | **Types of work**  **(publications, participation in conferences, etc.)** | **Form of submission of results** | **Deadlines for submission of results** |
| Analysis of scientific literature on the research topic | preparing part of master’s thesis | Chapter 1 | September - November 2024 |
| Development of approaches for using pretrained neural networks in mobile applications | preparing report | report | December - June 2025 |
| Development of approaches for train neural networks | preparing part of master’s thesis | Chapter 2 | July – December 2025 |
| Practical realization of mobile applications | preparing part of master’s thesis | Chapter 3 | December 2025 - January 2026 |
| Approbation of the results of the research at the industrial practice | preparing report | practice report | February - April 2026 |
| Preparing papers for conferences | preparing conference papers | conference papers | April 2026 |
| Presenting a paper at the conference | participation in conferences | abstract of report | April 2026 |
| Formalization of an article based on the results of research | publishing paper | article | April 2026 |
| Preliminary defense of the thesis in the department | predefense | Master's  Thesis | May 2026, extract from the department meeting on admission to defense |
| Dissertation Formatting | editing master’s thesis | Master's  Thesis | March - May 2026 |
| Defense of the dissertation on the committee | Master's  Thesis defense |  | June 2026,  Master's degree |
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1. **Control activities**

***(Master's reports at least twice a semester)***

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| **Type of control**  **(Master's student reports at department meetings)** | **Results of Master's student reports** | **Date and No. of the minutes of the department meeting** |
| Report on the implementation of the individual plan |  |  |
| Report on the implementation of the individual plan |  |  |
| Report on the implementation of the individual plan |  |  |
| Report on the implementation of the individual plan |  |  |
| Report on the implementation of the individual plan |  |  |
| Report on the implementation of the individual plan |  |  |
| Report on the implementation of the individual plan |  |  |
| Preliminary dissertation defense |  |  |
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1. **Practice**

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| **Title of practice** | **Number of weeks, dates** | **The venue** |
| Research | 8 weeks  From 08.02.2026  to 03.04.2026 |  |
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1. **Additions and amendments to the Individual Work Plan of a Master's student**

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| **№** | **Additions and amendments** | **Basis** | **Signature of the Head of Department** |
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| Dean (vice-dean) |  |  |  |
|  |  |  |  |
| Head of Department |  |  |  |
|  |  |  |  |
| Supervisor |  |  |  |
|  | *(signatures)* |  | *(initials, surnames)* |