ARKHIPOV ALEKSANDR

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GitHub

EDUCATION

Moscow Institute of Physics and Technology, Moscow, Russia *2021 - 2023*
Master's degree
Phystech School of Applied Mathematics and Informatics
Sub-faculty ABBYY Computer vision and document scanning technology

Moscow Institute of Physics and Technology, Moscow, Russia *2017 - 2021*
Bachelor's degree GPA: 6.41/10
Department of Control and Applied Mathematics
Sub-faculty ABBYY Computer vision and document scanning technology
Diploma "Segmentation of handwritten lines and markups in document images"

Lyceum «School №2», Moscow, Russia *2015 - 2017*
Top tier Physics & Math's Russian lyceum GPA: 4.7/5

WORK EXPERIENCE

Huawei Research & Development, Moscow, Russia *2020 July - December*
Intern
I worked in the department of augmented and virtual reality systems. Research on a computational problem of simultaneous localization and mapping(SLAM) is done. Participated in the preparation of a new project on Collaborative SLAM.

Hilti, Moscow, Russia *2019 August - September*
Junior Developer
Created an interactive web application to help to collect, store, and present data. My task was to develop a working prototype with a comfortable design for further promotion of this project. The backend is developed with the web framework ASP.NET Core. The frontend is designed with the help of HTML, CSS, JavaScript.

PROJECTS

Bachelor's thesis *2020 November - Present*

Under the leadership of Ivan Germanovich Zagainov, a study of various architectures of neural networks designed for object detection and semantic segmentation of handwritten elements in photographs of checks is carried out. A synthetic training sample was generated for training.

Feature selection research *2020 April - Present*

The work is carried out in a team of 3 people as part of the A.M.Katrutsa optimization methods course. The goal was to study greedy algorithms and evaluate their performance using the theory of submodular functions. As the result of the research, the scientific article is written.

Shell-like extensions *2018 September - November*

- ls, cp command implementation
- Piping the result of one process to another, semaphores

Mathematical modelling of the heat conduction process *2018 November - December*

- Piping the result of one process to another, semaphores
- Distributed computing. MPI, OpenMP, pthread.h

RELEVANT COURSES

Mathematical Courses	**Computer Science and other**
Stochastic Processes	Data Science in consulting | McKinsey
Probability Theory	Computer vision course | Huawei
Analytical Mechanics	Math and Python for data science | Coursera & Yandex & MIPT
Linear Algebra	Relational Database Architecture
Abstract Algebra	Algorithms and Data Structures
Lebesgue Measure	Asynchronous Programming
Combinatorics	Automata Theory
Differential Equations	Operating Systems
Analytical Mechanics	Algorithms and Computation Models

SKILLS

Programming Languages	C/C++ (3/5), Python (3/5), SQL (3/5)
Frameworks	PyTorch (3/5), Numpy (3/5), Matplotlib (3/5)
Software & Tools	LaTeX, Git, Jupyter, Bash, Linux, PowerPoint, Excel
Languages	Upper-Intermediate English, Native Russian
Soft skills	Logical thinking, analytically minded, leadership experience