Olga Eduardovna Pushkova

Personal Data

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Education

2024-Present — Master's Degree in Mathematics and Computer Science
Applied Computational Mechanics Program
Skolkovo Institute of Science and Technology, Moscow, Russia
Advisor: Prof. Alexander Kvashnin

2020-2024 — Bachelor's degree in Materials Science and Technology of Materials
Institute of New Materials
National Research Institute of Science and Technology MISIS, Moscow, Russia
Advisor: Prof. Alexander Kvashnin
GPA: 4.0/5.0

Work Experience

Sep 2024 - Present | Industry-Oriented Computational Discovery at Scoltech, Moscow
Student researcher
Computational search for novel materials with optimal desired properties. Applying machine learning techniques to analyze databases, particularly symbolic regression techniques.

Sep 2023 - Dec 2023 | PCETE at Scoltech, Moscow
Technician
Using symbolic regression techniques to develop descriptors for predicting and analyzing material properties;Training of models based on symbolic regression to develop a descriptor to describe the biological activity of SAR-like compounds.

July 2023 - August 2024 | PCETE at Scoltech, Moscow
Practice
Structure-property relationship research for nanoparticles by symbolic regression methods (SISSO).

Sep 2021 - Sep 2023 | NUST MISIS, Moscow
SMM manager and designer in different student communities

Projects

Effective alloy catalysts for hydrogen production | Completed Project
Development of a new catalytic material based on a high-entropy alloy for use in the electrolytic splitting of water to produce hydrogen. This alloy acts as a catalyst to significantly reduce energy consumption in the production of hydrogen by electrolytic splitting of water.

Predicting the adsorption energy of nanoparticles | Current Project
Prediction of adsorption energies of nanoparticles and nanoalloys using different machine learning methods.

Technical Skills

Programming languages:	Python, C#, SQL
Deep Learning Frameworks:	PyTorch, TensorFlow, scikit-learn, SISSO, M3GNet
Libraries:	NumPy, Pandas, Scipy, Matplotlib, Seaborn,
Other Libraries:	ASE, Pymatgen, Matminer, Dscribe
VCS:	Git
Operating Systems:	Ubuntu, Windows
Other Software:	MS-Office, VS-Code, LaTeX, VESTA, KOMPAS 3D, Figma, Miro

Soft Skills

Languages	English - Upper-Intermediate Russian - Native
Soft Skills	Teamwork experience Ability to create graphic content for publications and presentations

Extra Curricular Activities

Participation in the conference 2024	Participation in the 66th Russian National Scientific Conference of MIPT Speaker
Participation in the conference 2024	Participation in the 79th Days of Science of MISIS University Speaker
Participation in the conference 2024	Participation in XXIV Annual Youth Conference with international participation Institute of Biochemical Physics of the Russian Academy of Sciences 'BIOCHEMICAL PHYSICS'. Poster presentation

Interests and Activities

Design, graphic arts
Books/films/games fantasy, sci-fi and documentaries
Python programming
Maths tutoring