ALEKSANDR GLUSHKO

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WORK EXPERIENCE

RWTH Aachen University department of Speech Recognition, and Nature Language Processing *June 2020 - current*
Speech Scientist

Making research in the area of automatic speech recognition task. More precisely, investigating Methods to Improve Language Model Integration using Bayes' approximation for Attention-based Encoder-Decoder models.
Some results are published in the paper: Paper

DropsLab in DigitalHub in Aachen *September 2019 - June 2020*
IOS Developer

Implemented backend and frontend for an IOS application in Swift.

RWTH Aachen department of Graphics, Geometry and Multimedia *November 2018 - August 2019*
Student Assistant in research in Computer Vison

Feature data processing. Implemented the algorithm of an invariant rotation of points cloud for image recognizing process using recurrent neural network in Python.

Institute for Spectroscopy RAS *January 2018 - June 2018*
Student Assistant in research in Spectroscopy and Nanooptics

Implemented a computer simulation model of a neutral filter in EUV range in Python for spectroscopy and nano-litography experiments.

PROJECTS

Parameter estimation of partial differential equations via neural networks
Parameter estimation of the PDEs from the given observations with replacement of an ordinary PDE solvers with a surrogate based on a feedforward neural network. Research Gate link

Implemented end-to-end AutoML pipeline using Kubernetes, Ray, Prefect, MongoDB packages for training ready models, such as LGBM.

EDUCATION

RWTH Aachen, Germany *Oct 2018 - Present*
MA degree in Simulation Science
Main subjects: Parallel and Distributed Computing, Fast Iterative Solvers, Numerical methods for PDE solving.
Electives: Machine Learning, Computer Vision, Stochastic Numerics, Automatic Speech Recognition.

Moscow Institute of Physics and Technology, Russia *Sep 2014 - Jul 2018*
BA degree in applied Mathematics and Physics
Main subjects: Calculus, Linear Algebra, Engineering subjects, Theoretical Physics, Physics.

SELF-EDUCATION AND PET-PROJECTS

- **Coursera (programming in python)**
  Content: OOP and Design Patterns in Python, Creating Web Services with Python.

- **Coursera (Machine Learning)**
  Content: Supervised/Unsupervised learning, Statistics for Data Analysis,
  Applied tasks of ML.
- **Summer school at Deep Learning Lab in MIPT**
  Content: Tensorflow for chat bots and NLP problems for commercial usage.

Experienced using Python, Swift, C++. Less experienced in Julia, Assembler.

SOFT SKILLS

- Presented a solution and guided a team solving the physical case in optik: "high-speed data transfering among the university campus using LASERs" in ITMO university.
- Organisation of Summer Course in a team of BEST Aachen community for international students in Aachen.
- Worked as Erasmus tutor for internatinal students in RWTH Aachen (Erasmus Aachen).