LEONID GREMYACHIKH

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EDUCATION

HSE University

Computer and Information Sciences

Nov 2019 – Oct 2022   Moscow, Russia

- PhD in Applied Mathematics and Informatics
- PhD candidate

HSE University

Data Science

Sep 2016 – Jun 2018   Moscow, Russia

- MS in Applied Mathematics and Informatics
- Grade in Reinforcement Learning = 10
- Grade in Deep Learning = 10
- Thesis theme: "Automation of Satellite Collision Avoidance Maneuvers with Deep Reinforcement Learning"

National Research University Moscow Aviation Institute

Design and Technology of Electronic Equipment

Sep 2009 – Feb 2015   Moscow, Russia

- Specialist in Engineering

EDUCATION / COURSES

Computer Vision

OTUS (2020)

Autumn School on Generative Models

HSE-Yandex (26-29 November 2019)

HARD SKILLS

- Deep Learning
- Computer Vision
- Machine Learning
- Reinforcement Learning
- MLOps

Python   ●●●●●
C++   ●●●○○

SOFT SKILLS

- presentation skills
- meeting management skills
- communication
- self-management, self-efficiency
- teamwork skills
- mentoring
- documentation

WORK EXPERIENCE

FBS
Data Scientist

📅 Sep 2022 – currently 　　📍 Moscow, Russia

Fraud Detection.

Python　ML　Research　MLOps

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Laboratory of Methods for Big Data Analysis
Research Assistant

📅 Apr 2018 – currently 　　📍 Moscow, Russia

ML research in different fields of physics, scientific publications, students, online courses.

Python　ML　Research　Physics　Papers　MLOps

Teaching

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TensorLab
Head of R&D

📅 Nov 2021 – Oct 2022 　　📍 Moscow, Russia

Calculating maneuvers and refining spacecraft position predictions.

Python　Management　ML　Research　Physics

MLOps

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ADALISK
Senior Machine Learning Engineer

📅 Aug 2021 – Sep 2022 　　📍 Moscow, Russia

Computer vision for planning tooth correction.

Python　ML　DL　Computer Vision　Research

MLOps

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Radio Engineering Institute named after academician A. L. Mints
Engineer

📅 Apr 2015 – Apr 2018 　　📍 Moscow, Russia

Digital signal processing, Signal Analysis, Space Objects Recognition.

C++　Mathcad

PROJECTS

Fraud Detection (2022)

- Real-time detection of frauders in time series

`Python` `ML`

Satellite Collision Avoidance Maneuvers (2021-2022)

- maneuvers calculation
- refining position predictions
- web service
- management

`Python` `Management`

Computer Vision for working with teeth (2021-2022)

- 3D segmentation and different tasks

`Python` `DL` `CV`

Reinforcement Learning for Poker (2021)

- RL: environment, simulator, algorithms, experiments, research

`Python` `RL`

Reinforcement Learning for automatic budget management for advertising campaigns. (2021)

- RL: environment, simulator, algorithms, experiments, research
- Management

`Python` `RL` `Management`

Anomaly Prediction in Storage Area Network (2018-2021)

- a publication "SANgo: a storage infrastructure simulator with reinforcement learning support"
- researched methods for improving Digital Twin of Storage Area Network, tested methods on chaotic systems, developed OpenAI Gym wrappers, applied RL methods
- NLP on logs

`Python` `Docker` `DL` `RL` `NLP`

Sixth Machine Learning in High Energy Physics Summer School (2020)

Volunteering, helping students.

`Python` `DL` `Mentoring`

International Data Analysis Olympiad (2020)

Participated in the preparation of Higher School of Economics and Yandex the 3rd international data analysts olympiad. The competition task – build a model that would predict the position of space objects using simulation data.

- analyzed the task and SOTA
- prepared and verified data (ephemeris) using GMAT and SGP4
- prepared a baseline (LR)
- checked and analyzed the solutions of the participants
- answered questions from participants

`Python` `GMAT`

Satellite Positioning (2019-2020)

The project task – build a model that would predict the position of space objects using simulation data.

- students mentoring

`Python` `Management` `Mentoring`

Distributed Deep Learning (2018-2019)

- developed Distributed Deep Learning pipelines

`Python` `Docker` `Azure` `DL`

Model Gym (2018)

- developed and debugged a hyperparameter optimization system

`Python` `ML`

Automation of Satellite Collision Avoidance Maneuvers with Deep Reinforcement Learning (2017-2018)

- a publication "Space Navigator: a Tool for the Optimization of Collision Avoidance Maneuvers"
- researched and developed a system for calculating maneuvers for spacecraft based on Machine Learning
- MVP is done
- participated in IAA SciTech Forum 2018

`Python` `DL` `RL`

Sex Prediction via Deep Learning (2017)

- researched Sex Prediction via Deep Learning by person's Friends Graph from social network and friends' photos
- used pre-trained VGG from ImageNet, Social Network Analysis
- collected data from "vk.com"
- obtained better score than the baseline

`Python` `DL` `Social Network Analysis`

PUBLICATIONS

- 📄 **Journal Articles**
  - Arzymatov, Kenenbek, Mikhail Hushchyn, Andrey Sapronov, Vladislav Belavin, Leonid Gremyachikh, Maksim Karpov, and Andrey Ustyuzhanin (2021). "Online detection of failures generated by storage simulator". In: *Journal of Physics: Conference Series* 1740, p. 012052.
  - K. Arzymatov, A. Sapronov, V. Belavin, L. Gremyachikh, M. Karpov, A. Ustyuzhanin, I. Tchoub, and A. Ikoev (2020). "SANgo: a storage infrastructure simulator with reinforcement learning support". In: *PeerJ Computer Science*, pp. 1–16.
  - "Space Navigator: a Tool for the Optimization of Collision Avoidance Maneuvers" (2020). In: *Advances in the Astronautical Sciences* 170, pp. 305–319. eprint: 1902.02095.

CONFERENCES & SPEECHES

- SMILES, Moscow, SKOLTECH, international summer school – poster presentation "AI and Satellite Problems" (2020)
- IDAO (International Data Analysts Olympiad) – IDAO Webinar on Data Analysis for Satellite Tracking (2020), webinar
- Space debris: fundamental and practical aspects of the threat, Moscow, Institute of Astronomy RAS and Space Research Institute RAS, Russian conference with international participation – report "Space Navigator" (2019)
- IAA SciTech Forum 2018, Moscow, RUDN, international conference – paper report "SpaceNavigator: a Tool for the Optimization of Collision Avoidance Maneuvers" (2018)

ART PROJECTS

- For All Exists Infinity – VR installation created with the Unreal Engine (2021, exhibition "Game Junction").

TEACHING

- Online course "Machine Intelligence, interdisciplinary perspective", HSE University, 2021-2022
- Seminars "Introduction to Data Analysis", HSE University, 2021
- Online course "Python for Data Science", Skillbox, 2020-2021