

Gleb Lukicov

PhD Candidate in Physics

Portfolio

🏠 <https://glukicov.github.io>

Contact

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📍 London, UK

Programming

Python, C++, Cython,
SQL, Bash, LaTeX

Data analysis

Techniques

Fourier transform
Monte Carlo methods
Iterative optimisation

Python tools

NumPy, pandas, SciPy,
Matplotlib, seaborn

Machine Learning

Techniques

Regression
Classification
Neural networks
GPU utilisation

Tools

scikit-learn,
TensorFlow, Keras

Software

Linux, PostgreSQL,
Docker, JupyterLab

Languages

English (native)
Russian (native)
Latvian (intermediate)

Interests

Professional

Education outreach
Technology blogging

Personal



Observational astronomy
Thai kickboxing

GitHub:  glukicov
LinkedIn:  glukicov
Medium:  @lukicov
Twitter:  @Gleb_Lukicov

Profile

- Numerate and articulate PhD candidate; proficient in Python, C++, SQL.
- 6+ years of experience in applying advanced statistical methods to large datasets.
- Applied expertise with distributed computing systems: servers, grid, IoT.
- Practical experience with big-data collection, storage, processing, and analysis.
- Proficient in using scikit-learn and TensorFlow pipelines for a variety of projects.

Experience

- 2017–2019 **Fermi National Accelerator Laboratory**, *Researcher* Chicago, USA
- Developed a  software infrastructure (Python, C++, Fortran) for data optimisation, improving the data quality by 4% and the yield of data by 3%.
 - Derived calibration constants into the production PostgreSQL database, which was used for processing of 2 PB of data.
 - Led the effort to add extra grid computing resources to the “common pool”, and designed tools for data quality monitoring.
 - Skimmed 0.5 PB of data into HDF5 tables for  regression analysis.
 - Supported the data acquisition as an on-call (24/7) computing expert.
 - Liaised with engineers and safety officers to ensure a smooth operation of the experiment.
- 2015 **Paul Scherrer Institute**, *Trainee* Villigen, Switzerland
- Prepared 12 TB for storage of data, and set-up a Linux analysis cluster.
 - Worked as part of a team of hardware and software experts to ensure optimal data collection.
- 2014 **University College London**, *Research Intern* London, UK
- Developed a QR-coded online database for over 300 research devices.
 - Produced a software solution for equipment testing with Raspberry Pi.

Projects

- 2015–2016 **Research Project**
- Developed a hardware solution using an Arduino-controlled servomotor, SiPM and Sr-90 source to test the efficiency of equipment.
 - Produced a software model of the developed set-up for verification.
- 2015 **Group Project**
- Led a group of nine students to successfully build an electrostatic radon detector using a PIN diode and a 7 L steel vessel.
 - Chaired monthly meetings and managed the group’s budget.

Education

- 2016–2020 **PhD** in Experimental Particle Physics University College London
(expected) Thesis work focused on data optimisation and big-data analysis.
Courses: Statistical Data Analysis, Entrepreneurial Skills, Data Science:
 - ML theory and techniques for big-data analysis, cloud computing
 - Logistic regression, SVMs, random forests, unsupervised learning
- 2012–2016 **MSci** in Physics with *First Class Honours* University College London
Courses: Scientific Programming, Statistical Physics, Electronics

Qualifications

- 2019 – Now **Certificate in Advanced Machine Learning** Coursera
- Deep learning on Google Colab using TPUs and GPUs
 - Bayesian methods for ML, CNN, NLP, reinforcement learning

Awards

- 2018 **Visiting Scholar Award (\$15,000)** Universities Research Association
Based on the evaluation of a research and budget plan