Ignatii Dubyshkin | CV

+7 916 295 2363 • kheldi@yandex.ru • DeadAt0m

A engineer who looks for inspiration in human brain and uses it to look for new instruments and technologies in various adjacent areas for further transfer back into the neuroscience field.

Experience

Samsung R&D Institute Russia — **Moscow, Russia**
Biometric Algorithm Lab — *January 2019–Now*
Research Engineer

Biometric algorithms and solutions for Samsung mobile devices:

- Develop Deep Metric learning algorithms for fast and efficient embeddings obtaining under restricted computational resources.
- Develop Landmark Detectors(deep learning based) for ToF and usual camera.
- Participation in development of biometric Matching algorithms.

Centre for Bioelectric Interfaces — **Moscow, Russia**
Research laboratory, part of Higher School of Economics — *November 2017–October 2018*
Research intern

- Search, implementation and enhancement of classical algorithms for preprocessing of brain related signal: ICA(various types), wavelet based denoising, filter bank common spatial pattern.

DevOps-Engineer

- Deploy and support of a private computational cluster and cloud (x8 Nvidia 1080Ti) based on dockerized services: NextCloud, Jupyterhub, Collobora, MatterMost and complex built jupyter kernels.

Neurocentre, LTD — **Moscow, Russia**
A startup in the area of neuroscience dealing in biofeedback and biomonitoring — *June 2017–June 2018*
Software Engineer

- Develop software for multichannel signal classification(deep learning based).
- Search and adapt new technological devices and models, analyze their applicability for the business interests of the company.
- Test the portable devices, ranging from heartbeat monitor to EEG and tDCS.

Institute of Higher Nervous Activity — **Moscow, Russia**
Neuroscience research institute, part of Russian Academy of Sciences — *June 2014–January 2016*
Research intern

- Produced and published a research titled "The Use of Machine Learning Methods for Identification of the Efficient Learning State in the Neurofeedback Paradigm".
- Won and fulfilled a grant in a team of 8 for the work on a subject of "Neurocorrelates of sensor memory reactivation during sleep in the dynamics of long-term background correlations of electronic brain activity and auditory evoked potentials".

Education

Academic Qualifications

- **Lomonosov Moscow State University, Faculty of Biology** — **Moscow**
  Postgraduate student in the Department of Human and Animal Physiology — *2018–Now*
  Laboratory of Neurophysiology and Neurocomputer Interfaces.

  I am working on the deep learning based brain computer interfaces, especially focusing on constructing architecture(work with multichannel time series) and analyzing their behavior(feature reverse engineering).

- **Higher School of Economics** — **Moscow**
  Master in Psychology Cognitive Science — *2016–2018*
  - Report for Neuroadaptive Technology Conference, Berlin, 2017, on the subject of "Neurophysiological Correlates Of Efficient Learning In The Neurofeedback Paradigm".
  - Produced a research on the theme "Advanced Signal Processing and Machine Learning Techniques for Unraveling Relations Between Various Functional Brain Imaging Modalities."

- **Moscow Technical University of Communication and Computer Science** — **Moscow**
  Bachelor in Applied Mathematics (Honours) — *2012–2016*
  With focus on Digital Signal Processing, Probability Theory and Machine Learning.

Coursera

Deep Learning **(specialization - 5 courses; deeplearning.ai)** — **Average Grade Achieved: 100.0%**
Medical Neuroscience **(Duke University)** — **Grade Achieved: 99.7%**
Algorithmic Toolbox **(University of California San Diego & Higher School of Economics)** — **Grade Achieved: 100.0%**
Data Structures **(University of California San Diego & Higher School of Economics)** — **Grade Achieved: 100.0%**

Technical and Personal skills

- **Platforms:** Linux, Docker, CUDA, QT
- **Programming Languages:** Proficient in: Python, C++, LaTeX;
  Python Stack: PyTorch, Cython, TensorFLow, Ignite, OpenCV, Scipy, Pandas
  Also basic ability with: Bash, JavaScript, C#
- **Skills:** Deep Learning, Neuroimaging, Reinforcement Learning, Computer Vision, Digital Signal Processing, Biometric.
- **Languages:** Russian (Native speaker), English (Advanced)

Interests and extra-curricular activity

- In mid-2017, I subscribed to the daily RSS feed from arxiv.org (cs.CV, cs.AI, cs.NE, cs.HC). Now this is my main source of news and inspiration.
- In 2015 I earned a scholarship of Huawei "For the achievements in the academic and professional areas".
- Other intersests include professional dancing, especially ballroom and latina, which I consider as main active hobby and guitar, which I am self-taught.