

# 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*  
*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*  
*Research intern* *November 2017–October 2018*
  - 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*  
*Software Engineer* *June 2017–June 2018*
  - 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*  
*Research intern* *June 2014–January 2016*
  - 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.....

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

## Technical and Personal skills

---

- **Platforms:** Linux, Docker, CUDA, QT
- **Programming Languages:** Proficient in: Python, C++,  $\text{\LaTeX}$ ;  
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 interests include professional dancing, especially ballroom and latina, which I consider as main active hobby and guitar, which I am self-taught.