

# Roman Beltiukov

MACHINE LEARNING RESEARCHER

Saint-Petersburg, Russia

December 8, 1995

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## Skills

**Machine Learning** Reinforcement Learning, Classic ML, Deep Learning, Computer Vision (+ OpenCV), TensorFlow, PyTorch

**Programming** Python, C#, C++/CUDA, SQL, LaTeX

**System administration** Windows Server, Linux (Debian-based), AD, Virtualization (Hyper-V, SCVMM, Xen), Network (Routing, Switching, Cisco), Data Storage systems (SAN)

**Languages** English, Russian

## Experience

### Research intern

JETBRAINS RESEARCH

- Research reinforcement learning approaches based on world model creating.

St. Petersburg, Russia

Oct. 2019 - now

### Python (programming language) tutor

HIGHER SCHOOL OF ENGINEERING

- Designed several Python courses for different kind of listeners.
- Semi-automated homework checking with unittests and GitHub.
- Wrote task book for Python learners with tasks ordered by complexity.

St. Petersburg, Russia

Sep. 2018 - now

### System administrator

HIGHER SCHOOL OF ENGINEERING

- Implemented failover solution for data storage network.
- Expanded and augmented existing virtual machines infrastructure.
- Automated multiple manual tasks with big Powershell or Python solutions.
- Deployed advanced network and infrastructure monitoring services (like IDS, IPAM, centralized logging, etc.).
- Expanded domain and infrastructure to several branch offices.
- Migrated multiple services to docker.
- Created solution for HTML5-based access to virtual machines on Hyper-V/SCVMM hosts.

St. Petersburg, Russia

Jul. 2015 - Jun. 2019

## Education

### SPbU (Saint-Petersburg University)

PH.D. IN COMPUTER SCIENCE

- Thesis: developing methods based on world model creation for implementing agent's memory in reinforcement learning.

St. Petersburg, Russia

Sep. 2019 - now

### SPbPU (Peter the Great Saint-Petersburg Polytechnical University)

M.S. IN COMPUTER SCIENCE

- Thesis: Optimizing Q-learning with K-FAC algorithm

St. Petersburg, Russia

Sep. 2017 - Aug. 2019

### SPbPU (Peter the Great Saint-Petersburg Polytechnical University)

B.S. IN COMPUTER SCIENCE

- Thrice student of the year
- Thesis: application of generative adversarial networks to music generation

St. Petersburg, Russia

Sep. 2013 - Aug. 2017

## Additional education & Courses

**Machine learning** Coursera (by Andrew Ng), score: 97.3%

**Probability theory** Stepik (by Computer Science Center)

**Statistics** Stepik (by Computer Science Center)

**Astrophysics** Coursera (by SPbPU), score: 88.9%

# Honors & Awards

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## INTERNATIONAL

2018	<b>Winner (individual)</b> , Student's competetion "World-IT-Planet", Cloud Computing track by Huawei	<i>Tyumen, Russia</i>
2018	<b>Runner-up (2nd place) in challenge (in-team)</b> , HackJunction, "Mobility" by QOCO	<i>Helsinki, Finland</i>
2017	<b>Winner (individual)</b> , Student's competetion "World-IT-Planet", Cloud Computing track by Huawei	<i>Sochi, Russia</i>
2017	<b>Challenge winner (in-team)</b> , HackJunction, "Robots, learning machines" by Eficode and Bitville	<i>Helsinki, Finland</i>

## DOMESTIC

2018	<b>Special award (in-team) by Institute of Bioinformatics</b> , BioHack 2018 by EPAM Systems	<i>SPb, Russia</i>
2017	<b>Winner (in-team)</b> , Hackathon "Make your university 20.35"	<i>SPb, Russia</i>

# Certifications

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## OPENEDG

2019 **Certified Associate in Python Programming**, Verification Code: 6iTz.Eo4D.sR6J

## MICROSOFT

2018 **Microsoft Certified Solutions Expert: Cloud Platform and Infrastructure**, Certification number: G878-5366  
2018 **Microsoft Certified Solutions Associate: Windows Server 2016**, Certification number: G878-5139  
2017 **Microsoft Certified Professional**, Certification number: G511-2245

## CISCO

2018 **Cisco CCNA Instructor**, Network Academy Instructor  
2017 **Cisco Certified Network Associate Routing and Switching**, Certificate verification number: 432903347147JRBH

## HUAWEI

2017 **Huawei Certified Network Associate Storage**, Certificate number: 010100901680806862091409

# Publications

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Optimizing Q-learning with K-FAC Algorithm  
Roman Beltiukov  
*Analysis of Images, Social networks and Texts*, 2019

# Open-source contributions

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## digestbot @ ODS.AI

- Project: slack bot for finding hot topics and important messages.
- Main maintainer and architector of the project.
- Contribution: architecture, crawler code, UI code, internal logic, deploy and maintaining.

## Tortilla @ maybe-hello-world

- Project: HTML5 web interface for Hyper-V virtual machine with role-based access (based on Apache Guacamole).
- Main maintainer and architector of the project.
- Contribution: architecture, UI, backend (except Java wrapper for Guacamole), deploy.

**PowerShell @ Microsoft** | Proposed and added additional arguments to commands for working with PFX certificates.

**Posh-ACME @ rmbolger** | Fixed incorrect error ignoring, which prevented automation of several tasks.

**xcp-lab-cli @ SPbSTU** | Bugfixes, implemented cleanup of old labs, teacher VM creation and other functions.