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Experience

- October 2015 – **Robotics researcher/developer**, *Institute for Information Transmission Problems RAS (Kharkevich Institute)*, Moscow.
- August 2017
- Self-driving car positioning and control software development:
 - System launch tool to replace ROSLaunch (Python, ROS, Paramiko): Just a more flexible tool than ROSLaunch.
 - Local positioning system (C++, Eigen, Kalman filters): EKF and rollbacks/roll-ons to use measurements with various delays.
 - Trajectory control system (C++, ROS);
 - Developers' web-interface (Python, JS (Leaflet.JS, Bootstrap), ROS): Interactive tool allows to correct positioning and control route passing.
 - Road markup-relied localization system (C++, ROS): A system uses recognized road markup for more accurate positioning.
 - Field testing;
 - Initiative works in deep learning for robotics control (just for fun).
- June 2015 – **Junior web-developer**, *WETA Group*, Remote.
- October 2015 Full-stack web-development
- Security system web-interface development: Two web-application were developed using Django non-rel backend and JS + Backbone.JS + Marionette.JS + Raphaël.JS frontend with MongoDB database;

July 2013 – **Control systems developer**, *Modern Signal Processing and Control Technologies R&D Laboratory*, Chelyabinsk.

June 2015

Control systems development.

- Turboshift control system development:

- Turboshift math modelling using MATLAB/Simulink;
- Design, assembling and commissioning of turboshift control system control cabinets;

- Autonomous car trajectory control system development:

- Participated in car control system structure development;
- Control algorithms development and math modelling using MATLAB/Simulink and VisSim;
- Algorithms realization (C++, control unit with STM32 and NuttX RTOS);
- Car control system test bench software development using Python 2.7 with NumPy and UDP;
- Participated in commissioning, HIL and field tests;

- UAV test bench software development: Scilab, interaction with National Instruments data acquisition system

January 2012 – **Laboratory assistant**, *South Ural State University*, Chelyabinsk.

June 2015 Participated in research works.

Education

2010–2015 **National Research South Ural State University**;
Computer Technologies, Control and Radio Electronics Faculty;
Automation and Control Department;
MEng, graduated with honours.

2015–2017 **Moscow Institute of Physics and Technology (State University)**;
Department of Innovation and High Technologies;
Cognitive technologies sub-faculty;
MSc in Computer Science.

Languages

Russian	Native speaker
English	Intermediate
German	Beginner
Polish	Beginner

Skills

Main:

C++ (Eigen, Boost), Python (Jupyter, NumPy, Sklearn, Paramiko), Matlab/Simulink, SciLab, VisSim, Git, ROS, Linux, L^AT_EX, Dynamic systems math modelling.

Experience with:

Bash, C, OpenCV, JS (Underscore.JS, Backbone.JS, Leaflet.JS), MongoDB, Django, Machine Learning, Computer Vision.

Miscellaneous

Interests

RC airplanes and quadrotors, skiing, bicycling.