Yulia Yakovleva

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Experience

October 2015 – Now **Researcher-developer**, *Institute for Information Transmission Problems RAS (Kharkevich Institute)*, Moscow.

- Self-driving car positioning and control software development:
  - System launch tool to replace ROSLaunch (Python, ROS): Just a more flexible tool than ROSLaunch.
  - Local positioning system (C++, Kalman filters): Nothing too interesting: EKF and rollbacks/rollons to use measurements with various delays.
  - Trajectory control system (C++, ROS);
  - Developers' web-interface (Python, JS, ROS): Interactive tool allows to correct positioning and control route passing.
  - Road markup-relied localization system (C++, ROS): A system uses recognised road markup for more accurate positioning.
  - Field testing;
- Initiative works in deep learning for robotics control (just for fun).

June 2015 – October 2015 **Junior web-developer**, *WETA Group*, Remote.

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 – June 2015	**Control systems developer**, *Modern Signal Processing and Contol Technologies R&D Laboratory*, Chelyabinsk.

Control systems development.

- Turboshaft control system development:
  - Turboshaft math modelling using MATLAB/Simulink;
  - Design, assembling and commissioning of turboshaft 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 – June 2015	**Laboratory assistant**, *South Ural State University*, Chelyabinsk. 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)**; Deparment 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++, Python (Jupyter, NumPy, Sklearn), Matlab/Simulink, SciLab, VisSim, Git, ROS, Dynamic systems math modelling

Experience with:

Bash, C, Linux, OpenCV, LaTeX, JS (Underscore.JS, Backbone.JS), MongoDB, Django, Machine Learning

Miscellaneous

Interests

RC airplanes and quadrotors, skiing, bicycling.