

Julia Semenova

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Skills

Main:

C++, Python (Jupyter, NumPy, Sklearn), Matlab/Simulink, SciLab, VisSim, Git, ROS, Dynamic systems math modelling

Experience with:

Bash, C, Linux, OpenCV, L^AT_EX, JS (Underscore.JS, Backbone.JS), MongoDB, Django, Machine Learning

Experience

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

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.

- 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;
- October 2015 – **Junior research fellow**, *Institute for Information Transmission Problems RAS (Kharkevich Institute)*, Moscow.
 - Autonomus robot navigation and control software development (C++, ROS, Python);
 - Initiative works in deep learning for robotics control.

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**

Miscellaneous

Interests

RC airplanes and quadrotors, skiing, bicycling.