Ivan Kharitonov

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I am interested in automotive and robotics areas and looking for a challenging software developer position in the self-driving industry and expand my knowledge and skills in control problems.

Education

2008 – 2014	**MS + BS** (electrical engineering) at **Bauman Moscow State Technical University**
2016	Data Mining in Action course (open ML course at MIPT)
2017 – 2019	Additional education at **Yandex School of Data Analysis** – Computer Science program
2019	Summer school "Control, Information, Optimization"

Professional Experience

Aug 2020 – now
Sberbank
Sberautotech

Software engineer - perception team
- Implemented models for point-cloud based object detection task.

Software engineer - prediction team
- Multi-object tracking – solve object tracking problem using random finite set statistics.

Jul 2015 – Nov 2017
FSUE NAMI
Central Scientific Research Automotive Institute – Information and Intelligent Systems Center

Research engineer at self-driving department (Shuttle project)
- Implemented perception models for object detection task – collecting/generating training data, optimizing the model design, model implementation (Caffe DL framework) and evaluation.

Software developer (Control systems) at transmission control systems department (Aurus project)
- System identification – created plant models for some vehicle mechanism, such that gearbox clutch hydraulic actuator.
- Implemented basic software layer for automotive microcontroller (C, Simulink, Altium Designer) from scratch.
- Designed and implemented a controller for hydraulic actuators with further improving quality metrics and decreasing system setting time.
- Decreased calibration time by developing automated calibration procedure of control system parameters and tested control algorithms on the testbench.

Mar 2013 – Aug 2015
BMSTU
Bauman Moscow State Technical University

Hardware and telemetry engineer on an FSAE team. Participated in international engineering competition FSAE as a member of the university racing team. Responsibilities: hardware and software development, sponsorship and partnership management. Achievements:
- Released projects: MS thesis – using RTK navigation for telemetry, F1-like steering wheel with integrated LCD, wireless telemetry module, signals expansion module by reverse-engineering the race ECU CANbus protocol.
- Received positive feedback from judges on the design event with good score.
- Established sponsorship contracts with several companies. As a result, we were granted new equipment.

Feb 2012 – Jul 2013
Crypto LLC
Systems integrator

Engineer at System Integration Department.
- Adapted the product to the customer by adding fault tolerance setup.
- Integrated the monitoring tool (Zabbix) with a data management system.

May 2009 – Feb 2012
PJSC VimpelCom

Test Engineer. The Vimpelcom's pilot project - TV provider for mobile phones.
- Monitoring of the head and base stations (DVB-H) and 2nd level technical support.

Teaching

spring 2019, 2020, 2021 **Yandex DA school**	TEACHING ASSISTANT FOR THE COURSE PRACTICAL RL Provided help and read seminars with hw checkups in HSE and YSDA

Generall Skills

Programming	Python (numpy, scipy), Simulink, MATLAB, C++
Other tools	git, vim, unix, latex, Vector software, Altium Designer, Solidworks, LabView
Speaking	Russian – Native, English – B2

Activities

Formula Student	DESIGN JUDGE FSAE AI UK 2020
	CHIEF DESIGN JUDGE Formula Student Russia 2020
motorsport	FLAG MARSHAL 2020 Formula One Sochi Gran Prix , 2020 Russian Circuit Racing Series
	SCRUTINEERING, TECHNICAL CONTROL, DATA ANALYSIS 2021 Russian Circuit Racing Series , 2021 Russian Hot Hatch Club Championship
sports	road bicycle racing, boxing
Other activities	organized reading club about robotics and self-driving