

Vladimir Yu. Ivanov

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Software (ML) Engineer

SUMMARY

- Proficient engineer with focus on 3 domains. Computer Science, Electrical Engineering, Machine Learning.
- Built practical experience in 3 areas. Consumer Electronics, Industrial IoT and Robotics, Self-Driving Technology.
- Helped to solve SW and HW problems for 4 types of companies. Outsource, Startup, Private, Public.

SKILLS

• Languages	C, C++, Python, Bash	• Embedded	MCU, RTOS, Schematics, Boards Bring-up
• Build Systems	CMake, Make, Bazel	• VCS, DVCS	Git, Perforce, Subversion
• Libraries	STL, Boost, CAF, Poco	• OS	WinAPI, POSIX, ThreadX, KasperskyOS
• Frameworks	ROS, Qt	• DevOps	Docker, Vagrant, Ansible, SaltStack
• Unit Testing	CppUTest, GTest, PyTest	• CI, CD	QuickBuild, Jenkins, TeamCity, TFS
• SAST	Cppcheck, PVS-Studio	• Data Analysis	Jupyter, NumPy, Pandas, Seaborn, SQL
• Comp. Science	Algorithms, Design Patterns	• ML, DL	Scikit-learn, Tensorflow (Keras), PyTorch
• Applied Math	Lin. Algebra, Calculus, Stats	• Comp. Vision	OpenCV, CNN, Image Classification

EXPERIENCE

Kaspersky, Aprotect – aprotech.ru

Lead Software Engineer

2022 – present

Moscow, RU

• TBD

Yandex, Self-Driving Group – sdg.yandex.com

Software Engineer

2019 – 2021

Moscow, RU

- Integrated orientation (IMU) and localization (RTK) device into electrical and network rover infrastructure (GeoHub).
- Implemented 2 features for GeoHub: power rails monitor (ADC driver, ROS node), programmatic config for IMU frame.
- Ported rootfs switcher from amd64 (PC) to arm64 (Jetson AGX Xavier). Covered 2 scenarios: Yandex.Rover, Xavier farm.
- Camera pipeline. Reduced logging size via ring buffer. Implemented 9 new status monitors and camera frames filter.
- Configured CI (TeamCity) for 2 third-party libs (ser2net, rtklib). Artifacts: deb packets (armhf, arm64, amd64).

Arrival Robotics – arrival.com

Lead Software Engineer

2017 – 2019

St. Petersburg, RU

- Launched programmatic control for 4 industrial robot manipulators. Vendors: Kuka, Fanuc, ABB, Universal Robots.
- Contributed 1 feature to robotic simulator (Gazebo): control of scene objects via keyboard (moving, rotation).
- Implemented SW (REST) for robotic tool controller. Launched 3 kinds of tools: jaw gripper, glue gun, tool changer.
- Helped to prepare 2 demo days for investors at local lab (St. Petersburg, RU) and at robotic factory (Banbury, UK).
- Tech interview holding. Reviewed more than 10 candidates: embedded SW engineers, HW engineers, QA engineers.

Rhonda Software – rhondasoftware.com

Software Engineer I, II, III

2012 – 2017

Vladivostok, RU

- Supported Camera-SDK (proprietary) components. Linux and RTOS device drivers. Firmware burning tool (Qt).
- Implemented raw data transceiver lib. Cross-platform: Windows, Linux, RTOS, multi-protocol: USB, UART, TCP.
- Performed products bring-up (EVT, DVT) in electronics plants for 5 customers: Nanit, Fusar, Glide, Revl, Soloshot.
- Supported SW of photo cameras. Drivers: CCD/CMOS, BSP, NAND, DRAM, LCD. Firmware burning tool (WinForms).
- Resolved a number of MP-blocking SW issues for 6 camera brands: Nikon, Pentax, Fujifilm, Samsung, Garmin, Ability.

Spider Pacific

Electrical Engineer

2010 – 2012

Vladivostok, RU

- Designed HW of 4 device prototypes via end-to-end process: schematic (Eagle CAD), firmware (C99), PCBA.
- Utilized MCU (AVR), text LCD, accel-gyro sensors, vacuum tubes, op-amps, domain-specific IC and more.

EDUCATION

National University of Science and Technology «MISIS» (en.misis.ru)

Institute of Information Technology and Computer Science

M.Sc. Machine Learning. GPA: 4.7 out of 5.0

2020 – present

Moscow, RU

Far Eastern State University (dvfu.ru/en)

Institute of Physics and Information Technology

B.Sc. Electrical Engineering. GPA: 4.5 out of 5.0

2005 – 2010

Vladivostok, RU