# Vladimir Yu. Ivanov

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*Software (ML) Engineer, Moscow, RU*

## SUMMARY

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

## SKILLS

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|---|---|---|---|
| • **Languages** | C, C++, Python, Bash | • **Embedded** | MCU, RTOS, Schematics, Lab Equipment |
| • **Build Systems** | CMake (main), Make, Bazel | • **VCS, DVCS** | Git (main), Perforce, Subversion |
| • **Libraries** | STL, Boost, CAF, Poco | • **OS** | WinAPI, POSIX, ThreadX, KasperskyOS |
| • **Frameworks** | ROS, Qt | • **DevOps** | Docker, Vagrant, Ansible, SaltStack |
| • **Testing** | CppUTest, GoogleTest | • **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 | | |

## EXPERIENCE

**Kaspersky, Aprotech** — February 2022 – present
*Lead Software Engineer* — Moscow, RU

· TBD

**Yandex, Self-Driving Group** — October 2019 – May 2021
*Software Engineer* — 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 for armhf, arm64, amd64.

**Arrival Robotics** — June 2017 – October 2019
*Lead Software Engineer* — 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** — October 2012 – May 2017
*Software Engineer I, II, III* — 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** — October 2010 – October 2012
*Electrical Engineer* — 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»** 2020 – present
Institute of Information Technology and Computer Science Moscow, Russian Federation
M.Sc. Machine Learning. GPA: 3.78 out of 4.00

**Far Eastern State University** 2005 – 2010
Institute of Physics and Information Technology Vladivostok, Russian Federation
B.Sc. Electrical Engineering. GPA: 3.63 out of 4.00