Vladimir Yu. Ivanov

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Software Engineer, Moscow (C++, Robotics, IIoT)

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

• **Main Langs**	C, C++17 (STL, Boost)	• **DevOps Tools**	Docker, Vagrant, SaltStack
• **Misc Langs**	Bash, Python-3 (ML/DL libs)	• **OS, RTOS**	WinAPI, POSIX, ThreadX
• **Build Systems**	CMake, Make, Bazel	• **CI/CD**	Jenkins, TeamCity, TFS
• **VCS, DVCS**	Git, Perforce, Subversion	• **SAST, DAST**	Cppcheck, PVS-Studio, Clang-Tidy
• **Frameworks**	ROS, MQTT (Mosquitto), Qt	• **Embedded**	MCU (AVR), Schematic, Board Bring-up

EXPERIENCE

Kaspersky, Aprotech [aprotech.online] – development of secure industrial data diodes 2022 – 2022
Senior Software Engineer Moscow, RU

· Suggested and contributed 1 feature: print product info (semver, build date, commit SHA, CI id and arbitrary label).
· Helped to port MQTT publisher PoC on new code base. Added MQTT over TLS support. Utilized Paho, Mosquitto.
· Minimized surface attack on 3rd-party via reducing crypto providers from 2 to 1 (MbedTLS replaced with OpenSSL).
· Fixed issue with X.509 certificate generation to secure connect KISG-100 product and Siemens SINUMERIK CNC.

Yandex, Self-Driving Group [sdg.yandex.com] – contribution to self-driving cars technology 2019 – 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 (armhf, arm64, amd64).

Arrival Robotics [arrival.com] – creation of flexible robotized industrial factory 2017 – 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 [rhondasoftware.com] – support and development of digital cameras 2012 – 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 – designing and manufacturing of applied devices for local market 2010 – 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

University of Science and Technology «**MISIS**» [en.misis.ru] 2020 – 2022
MSc. Data Science. GPA 4.7 out of 5. (not completed) Moscow, RU

Far Eastern Federal University [dvfu.ru/en] 2005 – 2010
Engineer. Information Systems and Technology. GPA 4.5 out of 5. Vladivostok, RU