

DENIS VICTOROV – LEAD SOFTWARE ENGINEER

SUMMARY

Summary

- 25+ years in development (architecture, firmware, schematics, PCB design, 3D Modeling)
- 15+ years in C/C++ development under various platforms and OS's (RTOS based, ARM, OpenWRT)
- 7+ years in unix shell script writing, frontend and backend development (Linux, PyQt)
- 2+ years programmable hardware development (FPGA, VHDL)
- 5+ years of work as Lead Software Engineer
- 2+ years of work as Software Engineering Team Leader
- 9 months of work as a Scrum Master
- 6 months of work as a Project Manager
- 6 months of work as Solution Architect
- English level: B1
- Driving license category B since 2003

Expertise

- Network protocol stack, DHCP, DNS, TCP/UDP sockets, Wi-Fi modules
- IoT cloud providers (AWS IoT Core, Azure IoT Hub)
- Security features: secure bootloaders, OTA updates, device authentication
- Algorithms and containers
- Linux internals
- Language platform dependencies
- Pico kernel real-time operating systems and multithreading
- Advanced schematics and PCB understanding skills
- AUTOSAR (Automotive)
- Hardware peripherals: ADC, DAC, UART, RS232(422,485), I2C, SPI, CAN, 1-Wire, etc

Leading & Management

- Leading team up to 12 members
- Reporting, planning, technical coordination
- Daily sync-up, weekly reports, estimation, task planning
- On-site coordination
- Presentation & customer communication
- Candidate interviewing

Courses and certificates

- Python 3 tutorial course
- C Tutorial course
- C++ Tutorial course
- Mastering Programming with MATLAB

SKILLS

Academic Disciplines

- **Humanities:** Russian, Bulgarian, Belarusian, Ukrainian
- **Natural Sciences:** Optics, Theoretical mechanics, Spectroscopy and spectral analysis, Heat and Mass Transfer
- **Formal Sciences:** Integer programming, Control in Robotics, Discrete programming
- **Applied Sciences:** LED, Asynchronous programming and multithreading, Resistor, Audio, video and audiovisual engineering, Inductor, Service Oriented Architecture (SOA), MVVM Architecture pattern, MVP Architecture pattern, Systems engineering, Software Architectural Styles, Antenna Design, Algorithms & Data structures, Engineering design, Relays, REST, Command Query Responsibility Segregation (CQRS), Electronic Components, Microservice Architecture Pattern, Fuzzy Logic, Clean Code, Fire alarm systems, Structured Logging, Operational Amplifier Design, Domain Specific Languages, DC-DC Converter Design, Electronics Engineering, Motors, Dependency injection, Transformer, Analog Signal Filter Design, Information Security, Microcontroller, Integrated Circuit, Fast Fourier Signal Processing, Reactive Programming, IOC, Electronic Design, MOSFET, Pair Programming, Radio Frequency Receiver Design, Capacitor, ISO 9126, Security Operation Design, Transistors, Fuse, Legacy Code, Functional Programming, Battery, Test-Driven Development, Radar Theory, Switches, Networks, Circuit Breakers

Engineering Practices

- **Digital Engagement:** 3D Art, Optimization
- **Cloud:** Cloud Support Services
- **Management:** Delivery Management
- **Advanced Technology:** Presale Support, Software Engineering Practices, Algorithms, STL, Gitflow, C Programming, Run-time behavior of C program, Assembler, Portability and security issues in C, System design and analysis, Continuous Integration, Memory management in C, C Libraries, Continuous Delivery, Core C
- **Quality Engineering:** Component / Integration Testing, Unit Testing

Industries

- **Life Sciences & Healthcare:** X-ray Diagnostics
- **Technology, Media & Telecoms:** Electronics

Leadership & Soft Skills

- **Communication:** Negotiations, Business Correspondence

Managerial

- **Project Management:** Project Monitoring and Control, Project Management, Project Estimation and Schedule Development, Programme Management
- **General Management:** Quality Management, Metrics and Key Performance Indicators, Kanban, Evidence Based Management
- **Organizational Management:** Organizational Capability Development

Technologies

- **Standard:** GSM, CAN, DNS, JSON-RPC, Ethernet, RS-485, TortoiseGit, I2C/SMBus, NFS, TCP, UDP, SCTP, Mercurial, FAT, FAT32, DHCP, VPN technologies, WiFi, SSH, I2S, Git, SMS, Berkeley Internet Name Domain, USB, MQTT, GPIO, PPTP
- **Framework:** Apache Hadoop, Matplotlib
- **Other:** Radiology Information System, RFID technologies, OpenWRT, Bare metal, Proximity cards, ASM, Azure SDKs, Cadance OrCAD, Collaborator, Alexa Voice Service, Azure IoT Hub Device Provisioning Service, Xilinx Products, Intel Quartus Prime, Eclipse Platform, Programmable logic, CAM350, Lattice
- **Hardware:** Cortex-A Processor, Bluetooth, Cortex, Microchip 8-bit MCU, ESP32, STM32 Nucleo Boards, Raspberry Pi, Microcontrollers, RS-232, STM8 Controllers, Microchip 16-bit MCU, STM32 Cortex-M family MCU, STM8 Discovery, AVR Processor, Media Entertainment Devices, ESP8266, MSP430, Arduino
- **Computer Language:** Bash, Borland Delphi, Assembler [x86], C#, C++, Pascal, AWK, Assembler [Microchip 8-bit MCU], C [Programming Language], Assembler [Atmel AVR], VHDL, Embedded Computer Languages, Assembler [Intel MCS51], Sed, Assembler [ARM core]
- **Solution:** Corel Draw, TortoiseSVN, Make [build automation tool], BitBucket, CMake, GNU Automake, Gitlab CI, Visual Studio Code, tcpdump, Autodesk AutoCAD, Confluence, Eclipse, SolidWorks, Sublime Text, Borland CBuilder, Trello, Microsoft Outlook, VMware Player, Jira, Version Control Systems, Visual Studio, MS PowerPoint, Gerrit, Adobe Photoshop, Qt Creator, Azure CLI, Buildroot, MathCad, GNU Autoconf, AWS IoT Core, Adobe Acrobat Professional, VIM, Perforce, Gitlab, drawio, Jenkins, PuTTY, Wireshark, GitHub, LibreOffice, Microsoft Excel, Microsoft Word, Control Systems Toolbox, Pro/Engineer
- **Platform:** MS Windows, Slack, RTOS, Hyper-V, MATLAB, Docker

EDUCATION

Name of the Education Establishment: Belarusian State University of Informatics and Radioelectronics

Faculty/College: Radio Engineering and Electronics, Modelling And Computer Designed Of Radioelectronic Devices

Degree (diploma): Specialist (Bachelor)

SPECIALTY: Engineer of Radioelectronics

WORK EXPERIENCE

Sep-2022 - Jan-2023

Lead software engineer, Head of embedded department, Rozum Robotics LLC

Customer: Rozum Robotics LLC

Project: Robotic arm with many degrees of freedom

Team Size: Dev.team 11 members

Project Role: Key developer; Scrum master; Head of embedded department

Tasks performed:

- Coordinating the work of departments
- Team management
- Project requirements collecting
- Software architecture design
- Hardware architecture design
- Software development
- Hardware development
- Software code brushing
- Software code review
- Tasks estimating and planning
- Documentation writing
- Debugging

Environment: • GCC • C / C++ : STL • OpenOCD • GDB • Docker • CMake • Matlab • Eclipse • ctags • vi, vim • Git • Jira • Confluence • Bitbucket • GNU ARM • GNU Windows • GNU Linux • Python • shell scripts • mqtt • json • CAN • Linker files • Multithreading • Websockets • DHCP • DNS • SSL • SSH

Sep-2021 - Aug-2022

Lead software engineer, EPAM Systems, <http://www.epam.com>

Customer: Software & Hi-Tech

Project: Maintenance and sustenance VSilicon Chipset TVs

Team Size: Dev.team 4 members

Project Role: Key developer

Tasks performed:

- Project requirements collecting
- Negotiations with the customer
- Software architecture design
- Software development

- Software code brushing
- Software code review
- Tasks estimating and planning
- Documentation writing
- Debugging

Environment: MySQL, • GCC • C / C++ : STL • websockets • Docker • CMake • Eclipse • ctags • vi, vim • Perforce • Git • Jira • Confluence • Bitbucket, • GNU Windows • GNU Linux • C • C++ • Python • shell scripts • mqtt • json • Linker files • Multithreading • Websockets • DHCP • DNS • SSL • SSH

Jul-2020 - Sep-2021

Lead software engineer, EPAM Systems, <http://www.epam.com>

Customer: Software & Hi-Tech

Project: Software for network control enterprise solutions: • Secure DNS (DNS Firewall and Response Policy Zone); • Network services (DNS, DHCP, IPAM); • Hybrid cloud and virtualization (network automation for cloud); • Network automation. EPAM provides development, sustaining, and R&D services

Team Size: Dev.team 7 members

Project Role: Key developer

Tasks performed:

- Project requirements collecting
- Negotiations with the customer
- Software architecture design
- Software development
- Software code brushing
- Software code review
- Tasks estimating and planning
- Documentation writing
- Debugging

Environment: MySQL, • GCC C / C++ : STL • websockets • Docker • CMake • Eclipse • ctags • vi, vim • Perforce • Git • Jira • Confluence • Bitbucket, • GNU Windows • GNU Linux, • C • C++ • Python • shell scripts • mqtt • json • Linker files • Multithreading • Websockets • DHCP • DNS • SSL • SSH

Apr-2020 - Nov-2020

Senior software engineer, EPAM Systems, <http://www.epam.com>

Customer: Software & Hi-Tech

Project: Development of the Smart Locker solution including mechanical, hardware, software and services

Team Size: Dev. team: 12 members

Project Role: Key developer

Tasks performed:

- Project requirements collecting
- Negotiations with the customer
- Software architecture design
- Software development
- Software code brushing
- Software code review
- Tasks estimating and planning
- Documentation writing
- Debugging

Environment: MySQL, • GCC C / C++ : STL, websockets • Docker • CMake • Eclipse • ctags • vi, vim • Git • Jira • Confluence • Bitbucket, • GNU Windows • GNU Linux • esp32 • freertos • Amazon AWS • C • C++ • Python • shell scripts • mqtt • json • Linker files • Multithreading • Websockets • DHCP • DNS • SSL • SSH • ADC • UART • SPI • I2C • Timers • PWM

Feb-2019 - Apr-2020

Senior software engineer, EPAM Systems, <http://www.epam.com>

Customer: Retail & Distribution

Project: Keurig's Connected Program Commercial Release Part of appliance connectivity squad Virtual brewer facility team

Team Size: Dev. team: 6 members

Project Role: Developer

Tasks performed:

- Project requirements collecting
- Negotiations with the customer
- Software architecture design
- Software development
- Software code brushing
- Software code review
- Tasks estimating and planning
- Documentation writing
- Debugging

Environment: N/A, • GCC C / C++ : STL, websockets • Python: Qt Creator, PyQt5, matplotlib, websockets • Microsoft visual studio .net C# • Eclipse • Git • Jira • Confluence • Bitbucket , • GNU Windows • GNU Linux • C, C++, C#, Python, shell scripts • Linker files • Multithreading • Websockets • DHCP • DNS • SSL • SSH

Apr-2018 - Oct-2018

Lead firmware engineer, ASBIS, CJSC, <https://perenio.by/>

Customer: ASBIS, CJSC

Project: IoT devices firmware creating (NDA bans more) based on OpenWRT

Team Size: Firmware Dev Team: • Software C developer: 3 members • Software C++ developer: 4 members • Software Perl developer: 2 members • Software Python developer: 3 members Server Dev Team: 8 members (C, C++, Python, Perl)

Project Role: Lead firmware developer

Tasks performed:

- Project requirements collecting
- Software architecture design
- Documentation writing
- Software development
- Technical coordinating of HW, SW and mobile team, manufacturer
- Prototypes testing, Debugging

Environment: N/A, • Buildroot • Cmake • GNU Linux • OpenWRT • Multithreading • Linker files • Git • Jira • Jenkins, • OpenWRT • RTOS • Multithreading • I2C • SPI • SDIO • DMA • gdb • gprof • DHCP • DNS

Oct-2015 - Mar-2018

Project chief developer, Adani, CJSC, www.adani.by

Customer: Adani, CJSC

Project:

- EPR (ESR) Spectrometer SPINSCAN X: <https://lab.adanisystems.com/solutions/solution-category/epr-esr-spectroscopy>
- GAMMA-RAY SPECTROMETER RUG 91-2: <https://lab.adanisystems.com/products/product-line/gamma-ray-spectroscopy>

Team Size: Firmware developer: 1 member (me) • Electronics developer: 2 members • Hardware developer: 3 members • Enclosure developer: 1 member • Dev team: 1 member (me)

Project Role: Electronics: hardware design creating, embedded firmware development

Tasks performed:

- Project requirements collecting
- Low level product architecture
- Low level schematics design
- components selecting
- components consistency verification
- Altium Designer project creating
- Software architecture design

- Documentation writing
- Software development
- Subordinate leading
- Subordinate code review
- Technical coordinating of 3D designer, HW, SW and mobile team, manufacturer
- Prototypes testing, Debugging

Environment: N/A, • IAR C for ARM • gcc (ARM Cortex-M4) • eclipse • JTAG • SVN, • RTOS • multithreading • I2C • SPI • SDIO • DMA • gdb • gprof • linker files

Nov-2010 - Sep-2015

Lead firmware developer, Euroautomatica F&F JLLC, www.fif.by

Customer: Euroautomatica F&F JLLC

Project: Relay Automation Line - more than 20 devices created: • Astronomical time relays • Current relays • Voltage relays • Time relays • Pulse relay • Photo relay • Phase control relays • Electric motor protection relay • Power limiters • Multifunctional temperature regulators • Current indicators • Voltage indicators • Power indicators

Team Size: Firmware developer: 1 member (me) • Electronics developer: 4 members • Hardware developer: 2 members • Enclosure developer: 2 members • Dev team: 1 member (me)

Project Role: Creating of industrial power management systems

Tasks performed:

- Project requirements collecting
- Low level product architecture
- Low level schematics design
- Components selecting, consistency verification
- Altium Designer project creating
- Software architecture design
- Documentation writing
- Software development
- Code review
- Technical coordinating of 3D designer, HW and SW team, manufacturer
- Prototypes testing, Debugging

Environment: N/A, • IAR Embedded Workbench for Atmel AVR • Hi-Tech PICC • Microchip MPLAB IDE • Atmel AVR Studio • gcc (AVR) • eclipse • JTAG • SVN, • multithreading • I2C • SPI • SDIO • linker files

Jun-2002 - Aug-2010

Firmware Engineer, Academy of Sciences of the Republic of Belarus, Institute of Mechanics and Machine Reliability.

Customer: Internal use and retail sales

Project: Dynamometric keys DMK - series, based on Hall sensor

Team Size: Firmware developer: 2 members • Electronics developer: 2 members • Hardware developer: 3 members • Enclosure developer: 1 member

Project Role: Development, production and repair of electronic measuring instruments

Tasks performed:

- Project requirements collecting
- Low level product architecture
- Low level schematics design
- Components selecting, consistency verification
- Altium Designer project creating
- Software architecture design
- Documentation writing
- Software development
- Code review
- Prototypes testing, Debugging

Environment: N/A, • Hi-Tech PICC • Microchip MPLAB IDE • gcc • eclipse • JTAG, • I2C • SPI • SDIO • linker files

Contacts:

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