

Boris Vinogradov
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1 SOFTWARE DEVELOPER

10+ years of software development experience. Design and develop system and embedded software. Product integration and adaptation. Research in embedded, software and hardware complexes. Collaborate with Product Manager, Architects, and a talented group of engineers to build new voice features which add value to customers and to deliver a meaningful product.

2 QUALIFICATIONS

- Math in field linear algebra, statistics and probability theoria
- System design and applied computer science
- Creation system from scratch and build toolchains
- Languages: C++, C, Rust, Python, Matlab, Shell
- Libraries: STL, Boost, PyCurl, Tokio, Async-std, Tonic, GStreamer
- Protocols: TPC/IP, GRPC, RTP, WebRTC
- Formats: JSON, XML, Toml, Yaml
- Markup language: Markdown, L^AT_EX
- Build systems: Makefile, CMake, Cargo, Basel
- Inter-language communication: MATLAB-Rust, Python-C
- Logs/Metrics: Logger, Datadog
- OS's: MacOS, Linux, Windows, FreeRTOS

3 LANGUAGES

- Russian (Native)
- English (Upper Intermediate)
- Spanish (Intermediate)
- Japan (Beginner)

4 EDUCATION AND COURCES

- Applied Information Science in Economics, Moscow Technological Institute, Bachelor Degree

5 SIGNIFICANT ACHIEVEMENTS AND PROJECTS

My Projects:

- Source code GitHub repository – <https://github.com/nisembedded>

- My blog – <https://nisembedded.github.io>

Publications:

D.N.Shloma, A.R. Egorov, B. G. Vinogradov, A. V. Protchenko — Improving of deployment system for special software products. Technika radiocommunication 1(24) 2015. ONIIP.

6 PROFESSIONAL EXPERIENCE

TK Elevator Aug 2024 – Present

- Development elevator related functionality
- Languages: C, C++, Python, Shell

Twilio Mar 2022 – Feb 2024 Software Engineer – Media Services

- Developed Twilio voice core server modules.
 - Developed internal metrics collection module.
 - Developed infrastructure connectivity for WebSocket-based clients.
 - Developed bidirectional media pipeline for media server.
 - Designing architecture and develop test suite for RTP connections.
 - Developed high-load test for media servers and other roles.
 - Developing Microservices in containerized environments based on k8s/AWS.
 - Testing and tuning services meet customer-facing SLAs.
- Languages: C, C++, Rust, Java, Python

Amazon/Ring NOV 2020 – MAR 2022 System software engineer

- Designed, bootstrapped firmware for new products.
 - Created Architecture, Design and PoC for new product.
 - Ported C++17 and Boost on baremetal hardware, fixed compiler related issues on RISC-V 64 system.
 - Investigated firmware optimization and device capabilities.
 - Optimized video/voice network performance on main line products.
 - Improved video bandwidth adaptation algorithm.
 - Design and implement autotune algorithm.
 - Created series of production tests for autotune algorithm.
- Languages: C, C++, Python

EPAM NOV 2018 – NOV 2020 Senior software engineer

- Setup and operate high throughput data pipelines to power the product.
 - Designed and developed communication software for audio/video calls with WebRTC.
 - Made internal Rust community more active and well-known: created demos and examples on how to use rust more efficiently, fixed issues with some internal admin tools (rust-based).
- Languages: C, C++, Rust, Python

Promwad Electronics Designs NOV 2017 – NOV 2018 Software engineer

- Designed and developed embedded software for STB and smart TV.

Languages: C,C++,Java, Rust, Python

Samsung Electronics / Samsung R&D FEB 2017 – AUG 2017 Software engineer

- Designed and developed software solutions.
- Technical analysis and code optimization for ARM architecture
- Created ARM Trust Zone security system applications, system library
- Created ARM Trust Zone ports for new devices

Languages: C,C++

SymphonyTeleca JUL 2015 – JAN 2017 Principal software engineer

- Designed and developed embedded systems.
- Designed programming modules and Linux kernel developing.
- Analysed of system solutions and provided integration with full support.
- Developed system communication modules.
- Developed code generation utility and document generation utility for electronic document system.
- Developed Android for Auto bsp and support for CAN binding through bind service

Languages: C,C++,Java, VB, Python

ONIIP OCT 2013 – JUL 2015 Software engineer

- Designed and developed internal high modular framework.
- Designed and developed code generator for upper speed, high accuracy developing.
- Designed communication protocols and high-level operations.
- Designed and developed of GNU/Linux based and bare metal systems.
- Developed communication modules and RPC subsystem.
- Developed system for transfer in high noise radio channels.
- Developed remote deploy and software update system.

Languages: C,C++, Python, Fortran, MATLAB, Scilab