

OLEKSANDR HUBANOV

Contacts

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Github: alexgubanow
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Skills

IBM z/OS, Embedded Linux, ARM

C/C++ (system-level), C#, Java, Python, HLASM, Verilog, MATLAB

REST, gRPC, OpenTelemetry

Valgrind, Wireshark, IPCS, z/XDC
Git, Jenkins

Languages

English (C1)

Lithuanian (A2)

Ukrainian (native)

Russian (native)

Hobbies

Classical guitar
Night driving
3D printing
Bicycling

Dum spíro, spéro

System-level Principal Software Engineer with product ownership experience and expertise in performance-critical C/C++ systems across embedded platforms and hybrid cloud environments. Leads architecture, modernizes legacy systems, and mentors engineers while delivering reliable, scalable monitoring and diagnostic solutions.

Experience

Rocket Software

Principal Software Engineer
Senior Software Engineer
Software Engineer III / II

Vilnius, Lithuania
Mar 2025 – Present
Apr 2023 – Mar 2025
Dec 2020 – Apr 2023

- Lead architecture and technical direction for core OMEGAMON framework components on IBM z/OS and hybrid environments.
- Designed, developed, and maintained system-level C/C++ and HLASM components at the core of the OMEGAMON TEMS and ITM framework.
- Acted as technical authority for complex issues involving system dumps, protocol handling, and low-level diagnostics under strict platform constraints.
- Mentored engineers and drove cross-team collaboration across backend, UI, and platform teams to deliver reliable, scalable solutions.

Sonderus

Software Developer

Vilnius, Lithuania
Jul 2019 – Dec 2020

- Developed embedded C/C++ software and Linux kernel modules for system-level tools.
- Worked across firmware, kernel, and user space, integrating hardware interfaces into Linux-based systems.
- Implemented full ONVIF support, including SOAP-based control interfaces and GStreamer-based media streaming on Linux.

Precizika Metrology

Engineer Programmer

Vilnius, Lithuania
Oct 2017 – Jul 2019

- Designed firmware and calibration systems for precision linear encoders.
- Developed signal processing tools and supporting PCBs for nanometer-level measurement accuracy.

Vilnius Gediminas Technical University

Junior Researcher

Vilnius, Lithuania
Nov 2016 – Aug 2017

- Supported biomechanics research projects using MATLAB and signal analysis.

Various Roles (Freelance, Part-time)

System Admin / Electrician / Developer

Kharkiv, Ukraine
2008 – 2016

- Early technical roles in system administration, hardware support, and embedded integration, building a strong foundation in operating systems and networking.

Open Source Leadership & Contributions

Open Mainframe Project — TerseDecompress

Project Lead

2023 – Present

- Delivered formal project releases, including versioned packaging and distribution artifacts.
- Implemented a C++ port of the decompression engine to improve performance and usability outside the JVM.
- Evolved the tool to produce ZIP output from TERSE data, enabling seamless integration with distributed tooling that expects standard compressed formats.
- Introduced CI automation using GitHub Actions to validate builds and prevent regressions.

ICU (International Components for Unicode)

Primary Contributor (IBM z/OS Platform Support)

2024 – Present

- Restored and maintained IBM z/OS build support by migrating from IBM XL C to IBM OpenXL and resolving build configuration and UTF-8/BOM issues.
- Contributed fixes that prevented potential deprecation of library support for IBM z/OS platform.

Education

Vilnius Gediminas Technical University

Vilnius, Lithuania

PhD Studies in Biomechanics (paid scholarship, not completed)

2017 – 2022

- Conducted research in soft tissue biomechanics and EMG signal analysis.
- Mentored junior PhD students and contributed to academic publications.

Kharkiv National University of Radioelectronics

Kharkiv, Ukraine

Master's in Biomedical Engineering

2014 – 2016

Bachelor's in Biomedical Engineering (paid scholarship)

2011 – 2014

- Focused on medical signal processing and biomedical systems.

Kharkiv College of Medical Equipment

Kharkiv, Ukraine

Specialist Diploma in Medical Electronics Design (Honors)

2008 – 2011

- Focused on medical electronics, diagnostics, and servicing of electronic medical devices.

Publications

- Gubanov A., Zhemchuzhkina T., Nosova T., Nosova Y.
On the Methods of Registration of Biosignals for Human Interface Device.
19th International Youth Forum "Radio Electronics and Youth in the XXI Century".
- Gubanov A., Zhemchuzhkina T., Nosova T., Nosova Y.
Some Technological Solutions of Realization of Human Interface Device.
Bulletin of NTU "KhPI", 2015, 62(1171), pp. 52–57. ISSN 2079-5459.
- Gubanov A., Zhemchuzhkina T., Nosova T., Nosova Y.
Data Processing Electromyographic Module.
Shevchenkivska Vesna 2015: Radiophysics. Electronics. Computer Systems.
- T.V. Zhemchuzhkina, T.V. Nosova, Y.V. Nosova, A.V. Gubanov et al.
Statistical Analysis of the Spectral Characteristics of the EMG Signal for the Purpose of Differentiation of Lumbar Pain.
Bionics of Intelligence, No. 2(85), 2015, pp. 105–108.