

ALIAKSEI IVANOU

C++ Software Engineer

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With **over 12 years of experience**, including **7.5 years in optical sensor development for satellites and Unmanned Aerial Vehicles**, and **3.5 years in C/C++ commercial software development** (plus **1.5 years of freelance experience**), I specialize in performance-driven projects. I'm proficient in **MATLAB, Java, Ruby, Scala**, and **LabVIEW**, with hands-on **C++** expertise gained at EPAM Systems Laboratory. I am actively seeking opportunities to work on complex projects in the aerospace or embedded systems sectors.

Languages: Russian (native), Belarussian (native), English (B1+), Swedish (A2), Polish (B1).

Certificates: github.com/aliaksei-ivanou-by/Summary/tree/master/Certificates.

Recommendations available on LinkedIn: www.linkedin.com/in/aliaksei-ivanou-by/details/recommendations/.

SKILLS

Programming languages: C, C++, Java, JavaScript, Scala, MATLAB, SQL, Ruby, LaTeX, LABView, bash.

Fields: Aerospace systems, Unmanned Aerial Vehicles, Object-Oriented Programming, Digital Image Processing, Algorithms and Data Structures.

Tools & Libraries: MySQL, PostgreSQL, Git, CMake, Visual Studio, Ruby on Rails, Point Cloud Library, SSH, ReSharper C++, gdb, Jira, CI/CD, Jira, Jenkins, Amazon Web Services.

EXPERIENCE

Software Engineer, [Innowise Group](#), Dec 2024 - Now, Full-time job

Company, with 15+ years of experience, provides custom software development to 200+ clients worldwide, leveraging a team of 1500+ IT professionals. With a focus on innovation and digital transformation, Innowise has contributed to successful projects across fintech, healthcare, and other industries.

Technical stack: C/C++.

Software Engineer, [EPAM Systems Poland, Inc.](#), Aug 2022 - Aug 2024, Full-time job

Software Engineer, [EPAM Systems Belarus, Inc.](#), May 2022 - Aug 2022, Full-time job

Junior Software Engineer, [EPAM Systems Belarus, Inc.](#), Sep 2021 - Aug 2022, Full-time job

Company, with 30+ years of experience, delivers cutting-edge software solutions to Fortune 500 companies using a team of 60,000+ engineers across 50+ countries. With a strong focus on digital transformation, EPAM has driven innovation across industries, contributing to numerous high-profile acquisitions and IPOs.

Technical stack: C, C++11/14/17, STL, JavaScript, HTML, jQuery, Microsoft SQL Server, Nginx, gdb.

- Worked, maintained, and modernized a legacy library system (over 40 years old), working with a complex mix of C, Java, Scala, custom protocols, and various libraries.
- Worked, maintained and modernized a corporate system for the oil and gas industry, focusing on maintenance and improvement.
- Fixed 100+ bugs in C, C++, Java, JavaScript, and Scala, ensuring system stability and performance. Developed and implemented 20+ new features, integrating them seamlessly into the existing architecture while meeting customer requirements.
- Worked within an Amazon Web Services environment, leveraging its tools and infrastructure to optimize the legacy system and support 24/7 operations.

Software Engineer, [Freelance](#), Jul 2020 - Aug 2021

Technical stack: C, C++11/14/17, STL, Google Test, plog, CMake, FLTK, SQLite, Git, Visual Studio.

- Developed a home accounting app (github.com/aliaksei-ivanou-by/Home_Bookkeeping).
- Created a user-friendly graphical interface with FLTK for transaction entry and financial analysis.
- Integrated SQLite for efficient transaction data management and used Google Test for application reliability.
- Employed plog for error logging and debugging, and streamlined development with CMake for build automation.

Software Engineer, [Freelance](#), Jan 2020 - Mar 2021

Technical stack: C, C++11, STL, FLTK, Git, Visual Studio.

- Completed exercises from Programming: Principles and Practice Using C++ (2nd Edition) (github.com/aliaksei-ivanou-by/Stroustrup_Programming).
- Gained proficiency in C++ fundamentals, OOP, templates, and standard libraries for robust development.

- Developed graphical applications with FLTK, enhancing GUI design and event-driven programming skills.
- Managed projects with Git for version control and Visual Studio for coding, debugging, and organization.

Software Engineer, [RIFTEK, LLC](#), March 2020 - May 2020, Full-time job

Company, with 20+ years of experience, specializes in the development and production of optoelectronic measurement systems. Serving clients in industrial automation, transportation, and aerospace, RIFTEK provides high-precision sensor solutions used worldwide.

Technical stack: C++, Point Cloud Library, Open3D, Visual Studio.

- Developed software for generating 3D models from data collected by 5+ 2D laser sensors, enhancing accuracy in 3D reconstruction by 30%.
- Utilized the Point Cloud Library for efficient processing and manipulation of point cloud data, optimizing data handling and performance.

Software Engineer, [SKB Kamerton, JSC](#), Oct 2012 - Dec 2012, Part-time job

The product company specializing in the manufacturing, configuration, and implementation of equipment for satellite-based transport monitoring.

Technical stack: C/C++, C#, MySQL, PostgreSQL, Visual Studio.

- Maintained and supported C#-based software for vehicle tracking systems, ensuring high system reliability and performance.
- Debugged and resolved software issues, working with MySQL and PostgreSQL databases to optimize data storage and retrieval processes.

Research & Development Aerospace Engineer, [PELENG, JSC](#), Aug 2012 - Dec 2019, Full-time job

Company, with 50+ years of experience, specializes in the development and production of optical and optoelectronic systems for defense, aerospace, and industrial applications. The company provides high-precision imaging and targeting solutions used worldwide.

Technical stack: MATLAB, Ruby on Rails, System Tool Kit, MS Access, PostgreSQL.

- Developed and optimized image processing and compression algorithms for 10+ satellites and UAVs, improving data efficiency by 20% and enhancing image quality by 25%.
- Designed software for stitching satellite frames, removing defects, and enhancing brightness uniformity, improving remote sensing analysis accuracy by 30%.
- Created ADPCM-based image compression algorithms, optimizing storage and maintaining quality.
- Built predictive models for sensor calibration and quantization, reducing data loss by 15% and improving accuracy in Earth observation.
- Developed database systems and web interfaces for managing satellite data, increasing data accessibility and integration efficiency by 20%.
- Implemented resolution evaluation and image stabilization algorithms, enhancing image clarity for satellite and UAV applications.
- Conducted IMU calibration for an optical payload installed on UAVs.
- Operated optical payloads during 30+ UAV test flights, ensuring system performance and reliability.

Satellite Monitoring Systems Engineer, [ITSZEM, RUE](#), Jun 2010 - May 2012, Full-time job

The company specializing in land surveying, including the development of land cadastral and topographic maps and plans.

- Managed the installation and configuration of satellite monitoring systems for transport, ensuring seamless operation and reliability for over 100 units, including road and rail vehicles.
- Conducted regular maintenance and troubleshooting of the monitoring system, reducing downtime by 20% and enhancing overall system performance by 15%.

EDUCATION

- **Programming course. C++ EPAM Systems Laboratory :** [EPAM Systems, Inc.](#), Mar 2021 - Aug 2021
- **Programming course. C++ EPAM Systems Mentoring Program :** [EPAM Systems, Inc.](#), May 2020 - Aug 2021
- **Programming course. C++ Programming :** [IT-Academy.by](#), Mar 2018 - May 2018
- **Higher education. Radiophysics. Satellite information systems and technologies :** [Belarusian State University](#), Sep 2007 - Jul 2012

CONSENT TO DATA PROCESSING

I agree to the processing of personal data provided in this document for realising the recruitment process pursuant to the Personal Data Protection Act of 10 May 2018 (Journal of Laws 2018, item 1000) and in agreement with Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation).