Aliaksei Ivanou | C++ Software Engineer

aliaksei.ivanou.by@icloud.com | +48 573 339 586 | [LinkedIn](#) | [GitHub](#) | Warsaw, Poland | PL Work Permit

Software Engineer with 11+ years of technical expertise in algorithm development, system optimization, and cross-platform implementation. Seeking to leverage my expertise in C/C++ software development.

- **C/C++ developer** (**4+ years**) - Working across diverse technical stacks, collaborating with internal and client teams in a multicultural environment.
  - Improved system performance by 15% through codebase optimization and removal of legacy code.
  - Achieved a 25% boost in efficiency and reliability.
- **MATLAB developer** (**7.5 years**) - Specializing in data analysis and image processing for 10+ Earth Observation satellites.
  - Developed image processing and compression algorithms.
  - Created optimized algorithms that improved data quality and processing efficiency by 40%.
  - Reduced post-processing time by 60%.
- Experienced in Image Processing, Embedded Systems, and tackling complex structures.
- Skilled in optimizing and restructuring legacy systems, yet primarily focused on modern technologies and evolving stacks to drive innovation and business success.
- Committed to achieving business goals through deep domain immersion and the creation of effective user scenarios.
- Valid work residence permit for Poland.

Tech Stack & Domains

- *Languages & Frameworks*: C++, C++17, C++14, C++11, C, C89,, MATLAB, Qt, Qt 6.
- *Databases & Storage*: PostgreSQL, MySQL, SQLite, Microsoft Access.
- *Infrastructure & Cloud*: Amazon Web Services (AWS).
- *Development Tools*: git, GitHub, BitBucket, Jira, Jenkins, GCC, gdb, CMake, Visual Studio, FLTK GUI Library, plog logger, GoogleTest, Point Cloud Library, System Tool Kit.
- *Development Practices*: Test-driven development, CI/CD pipelines, Agile, Scrum, Kanban, Waterfall, Code review, Data Analysis, Software Design Patterns, Object-Oriented Programming, Debugging.
- *Domains*: Aerospace, Satellite Systems, UAV Systems, Embedded Systems, FinTech, Geoinformatics, Oil & Gas.

Experience

C++ Software Engineer | Innowise Group   12/2024 - Present

Innowise is a global software development company, specializing in Big Data, AI, RPA, IoT, AR/VR, and Blockchain.

- Mentored and onboarded 3 new developers through structured guidance and support, enabling them to successfully complete probation periods.
- Established robust technical quality processes including code reviews, best practices implementation (coding standards, security, performance optimization), technical interviews for C/C++ candidates, and comprehensive documentation improvements.

Tech Stack: C, C++, Qt, Qt 6, git, Jira, CMake, GoogleTest, Visual Studio, Test-driven development, PostgreSQL, MySQL.

C++ Software Engineer | EPAM Systems   09/2021 - 08/2024

EPAM Systems (NYSE: EPAM) is one of the global leaders in both digital engineering and IT consulting, recognized for innovation, cloud, and AI services.

- Delivered on key projects (Oil & Gas Corporate System, Library System), adapting to tech stacks from C89 to C++17, resulting in 15% improved system performance and stability.
- Enhanced 20% of the codebase by removing legacy components and implementing optimizations, resulting in measurable improvements: a 25% increase in performance speed, enhanced system reliability, and greater operational efficiency.

● Enhanced user experience by developing 16+ user-requested features, optimizing database queries, reducing user request handling speed by 15%, increasing codebase efficiency and contributing to a 10% increase in CSAT (Customer Satisfaction Score).

● Established and maintained productive relationships with internal and external teams, fostering effective communication through bi-weekly demos, regular meetings with the customer teams, and daily stand-ups with the internal team. This collaboration approach reduced integration and deployment times by 30%. Demonstrated excellent problem-solving and communication skills with a result-oriented mindset.

Tech Stack: C, C89, C++, C++14, C++17, Java, Java 8, Java 11, Scala, JavaScript, Amazon Web Services (AWS), Apache, Linux, gdb, SSH, git, BitBucket, Jira, Jenkins, GCC, Valgrind, CMake, Test-driven development, CI/CD pipelines, Agile, Scrum, Kanban, Code review, PostgreSQL, MySQL, TCP/IP, WebSockets.

C++ Software Engineer | Personal project   03/2020 - 06/2021

● Created independently a home accounting app with an intuitive FLTK-based interface for transaction entry and financial analysis, integrating SQLite for efficient data management.

● Employed GoogleTest for application reliability, plog for error logging, and CMake for build automation to improve development workflow.

Tech Stack: C, C++, C++11, git, GitHub, FLTK GUI Library, plog logger, GoogleTest, CMake, Visual Studio, Test-driven development, SQLite.

MATLAB Software Engineer | PELENG   08/2012 - 01/2020

PELENG is a developer and manufacturer of high-tech optical and optoelectronic systems for space, industrial, and surveillance applications. The company specializes in thermal imaging, precision optics, and advanced vision systems, emphasizing innovation and collaboration with public and private sectors.

● Created and optimized image processing algorithms in MATLAB for 10+ Earth Remote Sensing satellites with optical imaging systems, improving data quality and processing efficiency by 40%, while reducing post-processing time by 60% through advanced image stitching and defect removal techniques..

● Designed resolution assessment software for flight tests, improving image analysis speed by 5x.

● Developed and implemented an image compression algorithm in MATLAB for satellites, achieving 3-4x lossy compression while preserving image integrity and reducing computational load.

● Developed software in MATLAB for image type prediction for image quantization, improving image quality by 30% and enhancing Earth observation accuracy by 20%.

● Developed image processing modules for UAVs in MATLAB, including debayering, stabilization, and sensor fusion.

Tech Stack: MATLAB, git, GitHub, Proprietary Software, Test-driven development, Waterfall.

Education

● Higher education. Bachelor's Degree in Radiophysics. Satellite information systems and technologies : Belarusian State University, Faculty of Radiophysics and Computer Technologies, 09/2007 - 07/2012
● Programming course. C++ EPAM Systems Laboratory : EPAM Systems, 05/2021 - 08/2021
● Programming course. C++ EPAM Systems Mentoring Program : EPAM Systems, 05/2020 - 08/2021
● Programming course. C++ Programming : IT-Academy.by, 03/2018 - 05/2018

Languages

● **English**: Working proficiency (B1+)
● **Polish**: Conversational proficiency (B1)
● **Swedish**: Elementary proficiency (A2)
● **Russian**: Native proficiency (C2)
● **Belarusian**: Native proficiency (C2)