

Aliaksei Ivanou | C++ Software Engineer

aliaksei.ivanou.by@icloud.com | +48 573 339 586, +375 29 559 85 56
www.linkedin.com/in/aliaksei-ivanou-by | github.com/aliaksei-ivanou-by

Versatile 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. Valid work residence permit for Poland.

- Currently working as a **C/C++ developer (4+ years)** of experience) across diverse technical stacks, collaborating with internal and client teams across multiple countries and time zones, with experience in leading a 2-person team.

- Began as a **MATLAB developer (7.5 years)** of experience), specializing in data analysis and image processing for 10+ Earth Observation satellites and UAVs, developing image processing and compression algorithms.

Experienced about Image Processing, Embedded Systems, and tackling complex structures, with a strong ability to optimize and restructure legacy systems. Focused on achieving business goals through deep domain immersion, the creation of effective user scenarios.

Tech Stack & Domains

- **Languages & Frameworks:** C, C89, C++, C++11, C++14, C++17, 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.

- **Supported 3 new developers** through onboarding and mentorship, ensuring their successful completion of the probation period.

- **Conducted** code reviews to ensure quality and maintainability, enforced best practices in code quality (coding standards, static analysis), security (safe memory management, sanitizers), performance optimization (profiling, efficient memory usage), and CI/CD (automated testing, build pipeline).

- **Held** technical interviews to assess candidates' expertise in C/C++ development and improved technical documentation.

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.

- **Worked** on **several projects**, including an Oil & Gas Corporate System and a Library System, adapting to various tech stacks (from **C89** to **C++17**) to meet customer needs and deliver effective solutions, improving system performance and stability by **15%**. Demonstrated strong problem-solving and communication skills with a results-driven approach and cross-platform development expertise.

- **Improved** and **optimized** projects by **enhancing 20%** of the codebase and removing legacy code, resulting in a **25% boost in performance**, efficiency, and reliability, along with a **15% increase in functionality**.

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

- **Led a team of 2 developers** in feature development, optimizing project execution and resource allocation, which resulted in a **20%** reduction in feature delivery time.

- **Built and maintained positive relationships** with **internal** and **external teams**, fostering effective communication, which led to a **30% reduction** in **integration time** for new software versions and deployment.

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 defense, security, and industry systems, specializing in optoelectronic products like thermal sights, surveillance, space and UAV 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 system, enhancing data quality and processing efficiency by **40%**.

- **Developed software** for **image stitching** and **defect removal**, cutting post-processing time by **60%**.

- **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, **calibrated** Inertial Measurement Unit sensors to improve coordinate accuracy by **30%**, and participated in **30+ UAV test flights** to evaluate software performance and ensure precise data acquisition.

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

Education

- 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

- 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

Languages

- **English:** High Intermediate proficiency (B1+)

- **Polish:** Intermediate proficiency (B1)

- **Swedish:** Basic proficiency (A2)

- **Russian:** Native or bilingual proficiency (C2)

- **Belarusian:** Native or bilingual proficiency (C2)