

ALIAKSEI IVANOU

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With **7.5 years of experience in developing optical sensors for satellites and UAVs¹**, I possess a strong background in both hardware and software development. My expertise includes **3 years of experience in C/C++** software development, where I appreciate the complexity and versatility of the language, and I am eager to work on projects that prioritize performance and innovative features.

Also I have a diverse skill set with experience in multiple programming languages, including: **MATLAB** for desktop applications; **Java, Ruby**, and **Scala** for web applications; **LabVIEW** for desktop applications.

Additionally, I have gained practical experience in **C++** through lab projects at EPAM Systems LAB, enhancing my ability to contribute effectively to development teams.

Languages: English (B1+). Swedish (A2). Polish (B1).

Nationality: Belarusian. **Valid work residence permit in Poland.**

I am enthusiastic about collaborating on challenging projects that allow me to leverage the full capabilities of C/C++ and contribute to cutting-edge solutions.

EXPERIENCE

Software Engineer | Innowise Group | Dec 2024 - Now

C/C++.

Software Engineer | EPAM Systems Poland, Inc. | Aug 2022 - Aug 2024

Software Engineer | EPAM Systems Belarus, Inc. | May 2022 - Aug 2022

Junior Software Engineer | EPAM Systems Belarus, Inc. | Sep 2021 - Aug 2022

C, C++11/14/17, STL, JavaScript, HTML, jQuery, Microsoft SQL Server, Nginx, ReSharper C++, gdb, SSH.

- Worked, maintained and modernized a legacy huge library system, 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 bugs in C-code and C++-code, occasionally in Java, Java Script and Scala, ensuring stability and performance across the system. Developed and implemented new features, integrating them seamlessly into the existing architecture while adhering to customer requirements.
- Worked within an AWS² environment, leveraging its tools and infrastructure to support and optimize the legacy system.

Software Engineer | RIFTEK, LLC | March 2020 - May 2020

C++, PCL, Open3D, Visual Studio.

- Developed software for generating 3D models from data collected by multiple 2D laser sensors, significantly enhancing accuracy in 3D reconstruction.
- Utilized the PCL³ for efficient processing and manipulation of point cloud data, optimizing data handling and performance.

Software Engineer | SKB Karerton, JSC | Oct 2012 - Dec 2012

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.

¹ Unmanned aerial vehicles.

² Amazon Web Services.

³ Point Cloud Library.

Research & Development Engineer | PELENG, JSC | Aug 2012 - Dec 2019

MATLAB, Ruby on Rails, System Tool Kit, MS Access, PostgreSQL

- Contributed to the development of optical sensors for satellites and UAVs, actively participating in flight tests and operational control to ensure system reliability and performance.
- Developed and optimized algorithms for image processing and compression for satellite and UAV⁴ systems, enhancing image quality and data efficiency.
- Implemented software for stitching satellite image frames, removing optical defects, and standardizing brightness levels, improving the accuracy of remote sensing imagery analysis.
- Designed custom image compression algorithms using ADPCM with variable quantization, achieving significant data storage optimization and maintaining image quality.
- Developed predictive models for sensor calibration and quantization ranges using satellite data, enhancing calibration accuracy and reducing data loss in Earth observation applications.
- Built database systems with web interfaces for cataloging satellite data, integrating modern and legacy systems to improve data accessibility and usability.
- Designed and implemented image resolution evaluation algorithms, improving image quality assessments for satellite and UAV applications.
- Created software modules for UAV digital image processing, including debayering, image stabilization, format conversion, and fusion algorithms, enhancing image clarity and target recognition capabilities.
- Operated as an optical payload operator during UAV test flights, contributing to the evaluation and optimization of the optical systems.

Satellite Monitoring Systems Engineer | ITSZEM, RUE | Jun 2010 - May 2012

- Managed the installation and configuration of satellite monitoring systems for transport, ensuring seamless operation and reliability.
- Conducted regular maintenance and troubleshooting of the monitoring system to minimize downtime and enhance performance.

EDUCATION

- **Polish. Level A1 - B1** : Accent School of Polish | Sep 2022 - Jul 2024
- **Swedish. Level A1 - B2** : The Centre for Swedish Studies | Jan 2022 - Jun 2023
- **C++ EPAM Systems Laboratory** : EPAM Systems, Inc. | Mar 2021 - Aug 2021
- **C++ EPAM Systems Mentoring Program** : EPAM Systems, Inc. | May 2020 - Aug 2021
- **C++ Programming** : IT-Academy.by | Mar 2018 - May 2018
- **English. Level A1 - B2** : Streamline.by | Sep 2015 - May 2017
- **Building web applications with Ruby on Rails** : Course.by | Feb 2015 - Jun 2015
- **Programming in Java** : IT-Academy.by | Oct 2013 - Dec 2013
- **LABVIEW. Data Acquisition** : BSUIR⁵ | Jan 2011 - Jan 2011
- **LABVIEW. Basics I** : BSUIR⁶ | Dec 2010 - Dec 2010
- **Radiophysics. Satellite information systems and technologies** : BSU⁷ | 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).

⁴ Unmanned aerial vehicle.

⁵ Belarusian State University of Informatics and Radioelectronics.

⁶ Belarusian State University of Informatics and Radioelectronics.

⁷ Belarusian State University.