

# Aliaksei Ivanou

## SOFTWARE ENGINEER

In general I used to learn C++, Java, Ruby, MATLAB, LabVIEW. Nowadays I think that C++ is interesting for its complexity and applicability in almost all spheres. I'd like to work on interesting projects, with the focus on performance and new features, where I can really use the full power of the C++ language.

Languages: English B1+, Swedish B1+, Polish B1 (in process).

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## SKILLS

C++

MATLAB

Git

CMake

Visual Studio

LaTeX

Object-Oriented Programming

Digital Image Processing

Data Structures and Algorithms

Ruby on Rails

Java

LabVIEW

## EXPERIENCE

### Software Engineer

**EPAM Systems Poland, Inc** *Aug 2022 - Present*

Technologies: C, C++11/14/17, Standard Library (STL), JavaScript, HTML, jQuery, Microsoft SQL Server, Microsoft SQL Server Management Studio, Nginx, ReSharper C++.

Software development.

### Software Engineer

**EPAM Systems Belarus, Inc** *May 2022 - Aug 2022*

Technologies: C, C++11/14/17, Standard Library (STL), JavaScript, HTML, jQuery, Microsoft SQL Server, Microsoft SQL Server Management Studio, Nginx, ReSharper C++.

Software development.

### Junior Software Engineer

**EPAM Systems Belarus, Inc.** *Sep 2021 - May 2022*

Technologies: C, C++11/14/17, Standard Library (STL), JavaScript, HTML, jQuery, Microsoft SQL Server, Microsoft SQL Server Management Studio, Nginx, ReSharper C++.

Software development.

### Software Engineer

**RIFTEK, LLC** *Mar 2020 - May 2020*

Technologies: C++, Point Cloud Library C++ Library, Open3D C++ Library, Visual Studio.

Software development for obtaining a 3D model using several 2D laser sensors.

### Research & Development Engineer

**PELENG, JSC** *Aug 2012 - Dec 2019*

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

Participation in development of optical sensors for satellites and optical sensor for UAV and flight tests and operation control. Development of photo/video processing algorithms (image compression algorithm, debayer algorithm, conversion of image format, stabilization algorithm, image fusion algorithm, etc).

## PROJECTS

### Home Bookkeeping (Personal)

**Software Developer** *Jul 2020 - Present*

Technologies: C++, FLTK Graphics C++ Library, Git, Visual Studio, Google Test, sqlite, plog, CMake.

Home accounting project. The software can be used to record all of your transactions including bills, credit card statements, receipts and more. The bookkeeping software includes all the features that you need to analyze and calculate every aspect of your cash flow.

[github.com/aliaksei-ivanou-by/Home\\_Bookkeeping](https://github.com/aliaksei-ivanou-by/Home_Bookkeeping)

### C++ Stroustrup Programming (Personal)

**Software Developer** *Jan 2020 - Mar 2021*

Technologies: C++, FLTK Graphics C++ Library, Git, Visual Studio.

Exercises solution from Bjarne Stroustrup's book "Programming - Principles and Practice Using C++ (2nd Edition).

[github.com/aliaksei-ivanou-by/Stroustrup\\_Programming](https://github.com/aliaksei-ivanou-by/Stroustrup_Programming)

### **Software modules for UAV (PELENG, JSC)**

**Software Developer** Aug 2018 - Aug 2019

Technologies: MATLAB.

Software modules for digital image processing for Unmanned Aerial Vehicle: debayer algorithm, image format convertation, stabilization algorithm, image fusion algorithm, etc.

### **Remote sensing satellites DB (PELENG, JSC)**

**Software Developer** Feb 2015 - Feb 2016

Technologies: Ruby on Rails, PostgreSQL, MS Access.

Earth remote sensing satellites database with extensive details.

### **Linear resolution analysis of images of the Earth surface (PELENG, JSC)**

**Software Developer** Aug 2014 - Mar 2016

Technologies: MATLAB.

Software for analyzing the linear resolution of images from Earth remote sensing satellites by the sharp edge method.

### **Improving image quality from remote sensing satellite (PELENG, JSC)**

**Software Developer** Feb 2014 - Aug 2014

Technologies: MATLAB.

Software for predicting quantization ranges for the Earth remote sensing satellite "Belarusian Spacecraft". The software requires data from another Earth remote sensing satellite to enter data on the estimated range of the Earth's surface albedo.

### **Image compression algorithm (PELENG, JSC)**

**Software Developer** Aug 2013 - Feb 2014

Technologies: MATLAB.

Image compression algorithm, Adaptive Differential Pulse Code Modulation (ADPCM), is prediction based image compression technique. Custom ADPCM techniques with multiple quantizers are developed with different compression ratio. Developed techniques are evaluated for both low and high contrast images.

### **Stitching frames from the Earth remote sensing satellite (PELENG, JSC)**

**Software Developer** Aug 2012 - Aug 2013

Technologies: MATLAB.

Software for stitching frames from Earth remote sensing satellites "Belarusian Spacecraft" and a series of satellites "Kanopus-V". In addition to stitching, the software removes optical defects from frames, aligns frames in brightness relative to each other.

## **EDUCATION**

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### **Polish. Level A1**

**Accent School of Polish** Sep 2022 - Present

### **Swedish. Level A1 - B1**

**The Centre for Swedish Studies** Jan 2022 - Present

### **EPAM Laboratory**

**EPAM Systems, Inc** Mar 2021 - Aug 2021

C++. Mentor: Alexander Stepaniuk.

### **C++ EPAM Mentoring Program**

**EPAM Systems, Inc** May 2020 - Aug 2021

Mentor: Alexander Stepaniuk.

### **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

Mentor: Michael Rumiantsau.

### **Programming in Java**

**IT-Academy.by** Oct 2013 - Dec 2013

**LabVIEW – Data Acquisition**

**Belarusian State University of Informatics and Radioelectronics** *Jan 2011 - Jan 2011*

**LabVIEW – Basics I**

**Belarusian State University of Informatics and Radioelectronics** *Dec 2010 - Dec 2010*

**Radiophysics. Satellite information systems and technologies**

**Belarussian State University** *Sep 2007 - Jul 2012*