

# Aliaksei Ivanou

## C++ DEVELOPER

See myself as a C++ software engineer.

Currently I'm studying on the C++ programming language mentoring program at company EPAM Systems, Inc to improve my language and software development skills. At the university I used to learn this language, but didn't think to make it my main tool. I used to learn Java, Ruby. 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.

Relocation possible: Belarus (Minsk, Brest), Lithuania, Poland, Ukraine.

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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 Developer

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

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

Development of software 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.

Bookkeeping software provides an essential solution for any organization or individual who needs to improve their degree of control over their budgeting. 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 - Present*

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

Exercises solution from Bjarne Stroustrup's book "Programming - Principles and Practice Using C++ (Second 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 conversion, 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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### **C++ EPAM Mentoring Program**

**EPAM Systems, Inc** *May 2020 - Present*

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**

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