



## Personal information

Surname(s) / First name(s)	<b>Shafeyev, Roman</b>
Address(es)	18/2 f.345 European avenue, Kudrovo, Leningrad region, Russia
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Email(s)	roman.shafeyev@gmail.com
Nationality(-ies)	Russian
Date of birth	Feb 14 1990
Gender	male

## Work experience

Date	March 2018 – July 2019
Occupation or position held	Product Lead of Connected Vehicle Cloud, ARRIVAL LTD, Saint-Petersburg, Russia
Date	June 2017 – March 2018
Occupation or position held	Insurance Telematics Product Lead, StarLine, Saint-Petersburg, Russia
Date	July 2015 – June 2017
Occupation or position held	C++/Python Server Developer, StarLine, Saint-Petersburg, Russia
Date	September 2012 – June 2015
Occupation or position held	Researcher of the Department of Computer Mathematics and Mathematical Modeling, NTU "KhPI", Ukraine
Date	July 2011 – November 2011
Occupation or position held	Software Developer of Hamburg University of Technology-TUHH", Germany

## Education and training

Place and Date	National Technical University "Kharkov Polytechnic Institute", Ukraine, 2013 – 2016
Specialty	Mathematical modeling and computational methods
Title of qualification awarded	passed PhD minimum, successful completion of postgraduate study
Thesis theme	Development of mathematical models and methods to solve the Dynamic Vehicle Routing Problem with uncertain input parameters
Place and Date	National Technical University "Kharkov Polytechnic Institute", Ukraine
	Computer Mathematics and Mathematical Modeling department, 2011 – 2013
Title of qualification awarded	Master's degree in Applied Mathematics with excellence
Place and Date	National Technical University "Kharkov Polytechnic Institute", Ukraine
	Computer Mathematics and Mathematical Modeling department, 2007 – 2011
Title of qualification awarded	Bachelor's degree in Applied Mathematics with excellence
Principal subjects covered	Mathematical Analysis Discrete Mathematics Programming (C,C++)

## Personal skills and competences

Mother tongue(s)

Other language(s)

*Self-assessment  
European level<sup>(\*)</sup>*

**English**

Computer skills and competences

Probability Theory and Mathematical Statistics  
Object Oriented Programming  
Numerical Methods  
Optimization Methods  
Logical Algorithms and Artificial Intelligence Systems  
Control Theory  
Development of Information Systems (Java, IDEF, Web 2.0)  
Computer Simulation  
Distributed Information Systems(Oracle)  
Actuarial Mathematics

## Russian

English

Understanding		Speaking		Writing
Listening	Reading	Spoken interaction	Spoken production	
B1 Independent user	C1 Proficient user	B2 Independent user	B2 Independent user	B2 Independent user

<sup>(\*)</sup> Common European Framework of Reference (CEF) level

## Operating System Experiences

- Linux (Debian, Ubuntu), MS Windows

## Programming Languages

- C/C++, Python 3, SQL, PL/pgSQL, Java(basic level), C#(basic level), Ruby(basic level)

## Database Management Systems

- PostgreSQL, Oracle, Redis, InfluxDB, ClickHouse

## Web-based technologies

- EmberJS(basic level), Spring MVC (basic level), Tornado

## Data Streaming / MicroServices

- Event-driven architecture(RabbitMQ)

## Continuous integration tools

- Maven, Jenkins CI, Gitlab CI, Capistrano (basic level), Ansible

## Development tools

- IntelliJ Idea, Eclipse, RubyMine, PyCharm, CLion, QT Creator, MS Visual Studio

## Version Control Systems

- Git, SVN

## Other skills

- Mathematics: MatLab, Mathcad, R Studio  
- Simulation: Rational Rose, GPSSW, Anylogic  
- Graphics: OpenGL(+shaders) (basic level)

SOURCE CODE

**Source code, demonstration video and documentation of my projects:**

<https://github.com/rshafeev>

PROJECT EXPERIENCE

## Insurance Telematics

(June 2017 – March 2018 )

*Used technologies and tools*

## PROJECT EXPERIENCE

- Basic: C++, POCO, CMake, STL, RMQ, Redis, MySQL, Oracle, Python, Tornado, SQLAlchemy

### *Description*

StarLine Insurance Telematics Project is consists of two parts: The Development of WebAPI tools for intagration with Telematics Providers and Insurance Partners; The Development of Software Solutions for cross-server Retransmission Telematics Data in real time mode.

### **SLNET – TCP/IP Server for interaction with telematics devices.**

(July 2015 – March 2018)

#### *Used technologies and tools*

- Basic: C++, POCO, CMake, STL, libevent, RMQ, Redis, MySQL, Oracle

#### *Description*

SLNET (StraLine Network) is a Asynchronous Nonblocking IO tcp/ip server for interaction with telematics devices.

### **OptSDK – Java-based framework for evolutionary computation.**

(September 2014 – June 2015)

#### *Used technologies and tools*

- Basic: Java, IntelliJ Idea

#### *Description*

The goal of OptSDK is to simplify the evolutionary optimization of user-defined problems as well as the implementation of arbitrary metaheuristic optimization algorithms.

### **JLogistics – Vehicle Routing software framework** (December 2013 – June 2015)

#### *Used technologies and tools*

- Basic: Java, IntelliJ Idea

- Web: Spring MVC, JSP/FreeMarker

#### *Description*

JLogistics is a vehicle routing software framework for Java that uses specialized metaheuristic algorithms to calculate an optimal solution of the different classes of the static and dynamic vehicle routing problems.

### **An application for computing the optimal productive supply of the power transformers in Dushanbe (Tajikistan).**(September 2012 – March 2013)

#### *Used technologies and tools*

- Basic: Matlab

#### *Description*

The developed application allows to find the best productive supply for each transformer with minimal losses on the transformers.

### **Supply Chain Building Blocks** (July 2011 – February 2012)

#### *Used technologies and tools*

- Basic: Java, Anylogic 6.6

- Routes building for transport agents: C++, WinAPI/MFC, Visual Studio 2008, OSM

- Database: Microsoft Excel (with macros), Microsoft Access

#### *Description*

The modeling platform follows a rigorous development process framework, where model validity is ensured by using Supply Chain Operations Reference as theoretical process framework. An agent based simulation platform is presented for generic supply chain modeling adding flexibility and configurability over existing models.

### **Numerical simulation of the motion of celestial bodies**(October 2009–July 2010)

#### *Used technologies and tools*

- Basic: C++, WinAPI/MFC, Visual Studio 2008

- Database: MS SQL Server 2008 Express

- Graphics: OpenGL

*Description*

The scientific software is for the numerical decision of the research problem of celestial bodies movement processes, visualization in three-dimensional space of modeling process, as well as processing, ordering and classification of the received orbital data. The main project objective was to define potentially dangerous for the Earth asteroids from the Aton's group and create the catalog of orbital evolution for them on a time interval from 2009 to 2200.

**Navigation GIS** (October 2009 – July 2010)

*Used technologies and tools*

- Basic: C++, WinAPI/MFC, Visual Studio 2008
- Database: PostgreSQL
- Network: TCP/IP sockets
- Render map: OpenStreetMap, Google Maps API

*Description*

The client-server system was used for vehicle movement monitoring in real time (Student project).

**Terrain Generator** (September 2008 – January 2009)

*Used technologies and tools*

- Basic: C++, WinAPI/MFC, Visual Studio 2008
- Graphics: OpenGL, shaders

*Description*

This application is the generator of three-dimensional landscapes (Student project).

PUBLICATIONS

- R. Shafeev. Investigation of tuning parameters of Tabu Search algorithm and its modification for solving the static Routing Courier Delivery Problem. Kharkov NTU "KhPI", 2016, 18 p.
- Lyubchik L.M., Kolbasin V.A., Shafeev R.A. Nonlinear Signal Reconstruction based on Recursive Moving Window Kernel Method. / IDAACS, Warsaw, Poland, 2015, 6 p.
- R. Shafeev. A new metaheuristic algorithm for Solving the Transportation Problem with Time Constraints / L. Lyubchik // Vestnik NTU "KhPI". – Kharkov: NTU "KhPI", 2013. – No3 (977). – p. 35–39.
- R. Shafeev. Relationship between the Vehicle Routing Problem with Time Windows and the Assignment Problem. // Theoretical and Applied Aspects of Cybernetics. – Kiev: Bukrek, 2012. – p.145–149.
- R.Shafeev

- May 2013, I presented the research work, devoted of development of client-server information system for solving the Dynamic Vehicle Routing Problem at the XV International Conference on Science and Technology "System Analysis and Information Technologies" at the National Technical University "KPI", Kiev, Ukraine.
- March 2012, The winner (1<sup>st</sup> place) of the all-Ukrainian competition of the research student works, section "Informatics and Cybernetics", Vinnytsia, Ukraine.
- September 2011, participant of the International Conference of Logistics at the Hamburg University of Technology, Hamburg, Germany.
- October 2010, I presented the research work, devoted to effects of electromagnetic fields on the complex biological objects at the Vth International conference "Environmental aspects of the technological security of the regions" at the National Automobile and Road University, Kharkov, Ukraine.
- May 2010, I presented the research work, devoted to numerical simulation of the motion of celestial bodies at the XII International Conference on Science and Technology "System Analysis and Information Technologies" at the National Technical University "KPI", Kiev, Ukraine.
- May 2007, The winner (2nd place) of the third stage of the all-Ukrainian competition of research carried out by the students-members of the Ukrainian Small Academy of Sciences, section "Computer networks, databases and data banks", Kiev, Ukraine.
- December 2006, The winner (1<sup>st</sup> place) of the second stage of the all-Ukrainian competition of research carried out by the students-members of the Ukrainian Small Academy of Sciences, section "Computer networks, databases and data banks", Zaporozhye, Ukraine.

## Additional information

### GRANTS

Grant of Government of Ukraine, 2010–2011.

Grant of the "DAAD-East European Partnership Exchange" funding framework between "National Technical University" (Kharkov, Ukraine) and "Hamburg University of Technology-TUHH" (Germany). During the internship, I worked as a team member, which developed Supply Chain Management project, Hamburg (Germany), July – October 2011.