

Nikolai Zhivotenko

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General Information

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Date of Birth	14th July 1994
Languages	Russian, English
Location	Moscow, Russia



Education

2012 - 2018

Master of Science (Hons). Grade 5 out of 5

Bauman Moscow State Technical University, Moscow, Russia.

- Space Applications of Composite Materials.
- Composite Materials 3D Printing.
- Scientific research in the field of fundamental and applied problems of designing units and compartments.

2012 - 2016

Bachelor of Science (Hons). Grade 4.75 out of 5

Voronezh State Technical University, Voronezh, Russia.

- Solid-state physics, Aerospace Composite Materials.
- Activities and societies - Ferroelectric Materials Laboratory.
- Research in the design and manufacture of products from polymer composite materials.

Experience

APR 2024 - NOW

Head of ML Department

Eurokappa, LLC., Moscow, Russia.

- Development and Implementation of AI/ML solutions.
- Development and Implementation of CAD solutions.

NOV 2023 - NOW

Head of Digital Engineering Department

Thrasos 3D., Monterrey, Mexico.

DEC 2021 - APR 2024

Principal Software Engineer

Mighty Buildings, Inc., Istanbul, Turkey.

- Development and Implementation of AI/ML solutions.
- Continuous Acquisition and Life cycle Support initiatives.
- Analysis of the company's digital maturity.
- Formation of a complete roadmap of industrial processes within the digital environment.
- Deployment of message brokers, OPC UA infrastructure.
- Digital transformation of production.

MAR 2020 - NOW

Senior Material Scientist

Mighty Buildings, Inc., Monterrey, Mexico.

- Physical and mathematical modeling of effective characteristics of heterogeneous materials.
- Theoretical support for material scientists.
- Planning and conducting experiments.
- Topology optimization of structures made of composite materials.

MAR 2020 - DEC 2021

Senior Software Engineer (CAD/CAE)

Mighty Buildings, Inc., Oakland (CA), US.

- Development design automation algorithms.
- Development an internal plugin for Autodesk Revit.
- Development BIM design simplification tools.
- Research and modification of CAM tools.

MAY 2019 - MAR 2020

Middle C++ Developer (CAD/CAE/3D Geometric Kernel)

Top Systems, Ltd., Moscow, Russia.

- 3D Geometric Kernel.
- CAD software.
- CAE software.

FEB 2017 - MAY 2019

Head Research Project Engineer

Kompozit, JSC., Moscow - Korolev, Russia.

- Research of the properties of materials and coatings of space rocket technology.
- Physical and mathematical modeling of composite materials.
- Investigation of CFRP, GFRP, and organoplastics for critical parts of space rockets.
- Curator of experimental mechanical and thermal tests of non-metallic composites.

SEP 2016 - FEB 2018

Research Project Engineer

Contact-Technology NPP, LLC., Moscow, Russia.

- A set of equipment developed and manufactured as part of the LPI RAS was placed in The National Radio Astronomy Observatory (NRAO) of the United States, located in Greenbank.
- Performing calculations of mechanical and thermal loads on a satellite onboard signal generator.
- Supervising the procurement of radio-electronic components for the satellite onboard signal generator.

Open Source Projects

2017 - NOW

Ariadne

- Ariadne is a research project that allows you to maximize the potential of composite structures and materials. For example, to increase the bearing capacity of products, to change the mass and material consumption, to reduce the cost.

Courses and Certifications

2022

- University of Michigan. The Finite Element Method for Problems in Physics.
- MESA International. Implementation and integration of MES-systems.

2021

- TÜV SÜD. D/P FMEA Implementation.
- AgiliX Consulting. AgiliX Consulting, Agile Fundamentals Training Course.
- BasisSoft, LLC. OriginPro Introductory.

2020

- St. Petersburg University. Introduction to the Mechanics of Deformable Solids.

Technology Stack

Programming Languages

- C++, C#, Python - main languages;
- G-code, no-code solution, - little experience;
- NASM, Lua, QBasic, Pascal, Fortran - have fun;

Frameworks, Libs & Tools

- STL, Boost, CGal, Eigen, FeResPost;
- .NET Core, .NET Framework (WPF/WinForms);
- PyTorch, SciPy, NumPy, Pandas, SciKit-Learn;
- Git, Docker, CMake, Weedle, AWS;
- UML (PlantUML), HTML/CSS/Markdown/YAML (Jekyll), LaTeX;
- CAD - Parasolid, RGK, ACIS, DevDept Eyeshot, Grasshopper;
- CAE - COMSOL, ANSYS, NX/Nastran;
- Math - OriginPro, MATLAB, Maple/Maxima;

Patterns, Principles, Techniques, OS

- OOP, DDD, TDD, Extreme Programming;
- SOLID, KISS, Scout Principle;
- Design patterns - MVC/MVVM, Microservices, Client-Server, EAI/ESB (SOA);
- Messaging protocols - MQTT (RabbitMQ), XMPP (ejabberd);
- GNU/Linux (Debian/Arch based), Windows;

Other Interests

Hobbies: Badge and postcard collecting, planespotting, ant breeding and ant farms, travel, etc.