

# Aleksandr Nevarko

DATA SCIENCE, COMPUTER VISION

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## Summary

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I am a MIPT and Skoltech graduate. I am keen on data science, programming, physics, maths and mostly all other technical sciences. My main hobbies are cars and chess. I have an entrepreneurial spirit and a lot of will to create new interesting projects. I am looking forward to learning new areas of data science and applications of physics and maths in it.

## Experience

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### Samolet Development

Moscow, Russia

COMPUTER VISION ENGINEER

Jul 2023 - present

- Multi-camera construction vehicle tracking and action recognition.
- Enhancing people detection using CCTV cameras in far distance and night scene. Line/zone-crossing detection.
- Bird-eye view building surroundings video analytics.

### NKBTech (nkbtech.ru)

Moscow, Russia

CEO

Jan 2023 - present

- Lead a team of four: three CV engineers and one full-stack developer.
- Full production pipeline development for Computer Vision smart video analytics. From data to models and business features delivery.
- Multiple projects on object detection, classification, pose estimation etc. in industry and smart city.

### AURORAI

Moscow, Russia

COMPUTER VISION ENGINEER

Mar 2022 - Jul 2023

- Digit detection and classification on train parts.
- Real-time moving train scanner, that classifies and counts wagons, detects defects, reads licence plates and numbers.

### Samsung AI Center

Moscow, Russia

RESEARCH INTERN

Jun 2021 - Jul 2021

- Personalized selfie editing project.
- Developed a conditional model.

### Skoltech CV Lab

Moscow, Russia

RESEARCHER

Dec 2020 - May 2022

- Latent Generative Models research. Scientific advisor prof. Victor Lempitsky.
- Asymmetric telepresence system via Microsoft Kinect and VR glasses. 3D Computer vision. Scientific advisor prof. Victor Lempitsky.

### MIPT/Sber

Moscow, Russia

TEACHER

Sep 2023 - present

- Physics laboratory teacher at MIPT
- Computer Vision Course for Sber and MISIS University

### Laboratory for modeling and designing special computing architectures, MIPT

MIPT, Moscow, Russia

PYTHON DEVELOPER / PHYSICIST

Jul 2019 - Oct 2020

- Integrated a physical model of a ballistic rocket into the project.
- Developed a physical engine for phased antenna arrays.
- Improved a graphical phased antenna array geometry redactor.

## Competitions

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## Hackaton CV expert

MULTIPLE HACKATONS EXPERT

- Leaders of Digital Transformation (LCT) 2023 expert for 6 cases.
- Samolet Urbancode 2023 CV expert.
- LCT Kransodar 2023 CV expert.

Moscow

May 2022 - present

## PetSearch

WINNER OF LEADERS OF DIGITAL TRANSFORMATION 2021 HACKATON

- A system, that lets users search for their lost dogs using data from CCTV cameras. It includes several components:

Moscow

Oct 2021

## MICCAI AutoImplant 2021 Challenge

(<https://github.com/aniton/AutoImplant-2020-2021>)

PARTICIPANT

- Automatic cranial implant design. Created a solution, that given a skull with a defect, generates a 3D model of a cranial implant specifically for the patient.
- 3 approaches tried: baseline from authors, winning solution from 2020 challenge, 2020 SOTA 2D segmentation network (SAUNet) applied for 3D.

Skoltech

May 2021

## Education

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### Bachelor Degree: MIPT

DEPARTMENT OF RADIO ELECTRONICS AND CYBERNETICS

THESIS: AUTOMATED DEEP REST API FUZZING SYSTEM

Dolgoprudny, Russia

2016 - 2020

### Masters Degree: Skoltech & MIPT

DEPARTMENT OF DATA SCIENCE

THESIS: GENERATIVE LATENT FLOW OPTIMIZATION

Skolkovo, Russia

2020 - 2022

## Skills

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**Languges** English (upper intermediate), German (B1)

**Programming** Python, Go, C/C++, git, Linux, Docker

**Maths** Linear algebra, mathematical analysis, differential equations, probability theory, etc.

**Physics** General physics, quantum mechanics

**Soft Skills** Leadership, communications, teamwork

## Honors & Awards

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2018 **Winner of the Russian stage**, Red Bull Basement University

2016 **Final Stage Winner**, Russian National Physics School Olympiad

Moscow / Berlin

Sochi, Russia