Danil Neverov

Currently in
Saint Petersburg, Russia
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⚿ LinkedIn

Professional Skills

● ● ● ●   C++, Applied Math

● ● ● ○   Linux, CMake, Git, CI/CD, Team Management

● ● ○ ○   Python, Matlab

● ○ ○ ○   CAM/G-Code, CAD Modeling, PLC Programming

Education

2013. Saint Petersburg State University
Specialist degree in Applied Mathematics and Computer Science
GPA 4.8/5 Diploma with distinction

2008. Fadeeev Academic Gymnasium of SPSU

Professional Experience

Aug. 2018 – Aug. 2022
Tech Lead of Robot Driver team at **ARRIVAL**
London, UK / Saint Petersburg, Russia

The main focus of our department was the software platform for the flexible fully autonomous robotic factory. I started as a developer and later became a team lead of 7 developers. We covered a hardware interaction layer of this platform. That includes polymorphic vendor-agnostic hardware communication, as well as custom real-time feedback controllers for specific robotic operations, which involved CV feedback, force feedback and direct torque/current control of robot motors. We called it Robot Driver. It runs on edge devices with Linux Preempt RT. My responsibilities included:

- Designing and implementing various feedback controllers and robot motion features on modern C++(up to C++20);
- Developing the architecture for a realtime Linux-based software that wraps these features as well as hardware communication and higher level MES communication into a single product;
- Analyzing data from sensors and metrological systems;
- Managing tasks for the team, enforcing good software practices, maintaining the long term product vision and roadmap;
- Communicating with other teams, higher management and external partners (contractors, universities, etc), presenting for the internal and external demos (investors, universities, etc.).

Information: arrival.com

Aug. 2013 – Aug. 2018
C++Developer - Mathematician at **CIMCO Software**
Copenhagen, Denmark / Saint Petersburg, Russia

Developed a mathematical core for CAD/CAM software:

- Worked on the new project of CNC toolpath generation software. My work consisted of designing complex computational geometry algorithms and implementing them using C++. I have done several 3-axis milling strategies, including some unique cutting edge strategies that didn't exist before.
  Information: mastercam.dk/hsm-performance-pack/

- Supported and expanded the functionality of 2D CAD editor. Developed a geometric library for working with 2D primitives.
  Information: cimco.com/software/cimco-cnc-calc

Personal

- I am an active enthusiast of DIY culture. I assembled and programmed two quadcopters out of hobby parts and Arduino.
- I occasionally participate in various hackatons and competitions such as TrackML. Back in school and university I won several local and state math and physical competitions among students.
- I am always eager to learn more so I am an active user of various online educational resources as well as offline seminars and meetings. I also occasionally participate in such events as a speaker.
- My scientific and professional areas of interest, in which I did my personal projects and maintain educational efforts are the following:
  - Industrial automation, Robotics, ML, Artificial Intelligence
  - Computer-Aided everything including CAD, CAM and
  - Computer-Aided Biotechnology, Bioinformatics, Neurosciences
  - Quantum Computing, Theoretical Physics and Math
- As for non-professionally related activities and interests I like Snow/Surf/Skateboarding, MTB, Japanese cars and Esports.