Alexey Konstantinov

🜨 Age: 21 y.o.

⊚ Location: Sirius, Russia

🌐 Language: Russian, English

🎓 Education

- **Peter the Great St.Petersburg Polytechnic University (2018 - 2022)**

  (Saint-Petersburg) Mechatronics and Robotics, Autonomous robots
  Bachelor degree, GPA = 4.8

- **Sirius University of Science and Technology (2022 - 2024)**

  (Sochi) Mathematical Robotics and Artificial Intelligence

🛠️ Skills

- **Python, C++, C**

  Main programming languages

- **Computer vision, OpenCV, YOLO**

  Object detection, Stereo vision, Structure-from-motion, etc.

- **TensorFlow, PyTorch, Deep Learning, Machine Learning**

  CV applications, Natural language processing, etc.

- **Robot Operating System (ROS)**

  CV, Autonomous navigation, etc.

- **Servers, Git, VPN, Linux, Docker, MongoDB**

  Launch, support, API-development, Every-day-use

- **Embedded systems developing**

  STM32, NRF24, ESP8266, NVIDIA Jetson, Arduino

- **CAD & CNC, Electronics, PCB developing**

  3D-modeling and 3D-printing, Laser cutting, Milling, Practical skills

👨‍💻 Work experience

- **Python/C++ Developer**

  Yandex Practicum

  Developing tests for the courses, managing CI in GitHub, developing special utilities.

- **Developer of the robot's concept**

  PALFINGER AG

  Developing a concept of the snake-like robot works as an articulated sling. Developing the bending mechanisms, overall system architecture and computer vision.

- **Embedded systems developer**

  Freelance

  Developing a firmware for such devices as radio transceivers, special equipment, control systems etc.

- **Tutor of C++ & Python programming languages**

  Freelance

  Teaching the students (high-school students, university students and graduates) a programming languages from zero to hero, project assistance and support.

- **Team-Lead in FabLab**

  Youth Project Activity Center "FabLab Polytech" (St.-Petersburg)

  Tutor of programming STM32 & Arduino microcontrollers, 3D-Modeling and 3D-printing, Theoretical mechanics for BioMechanic applications for university students, participating competitions (such as WorldSkills), etc.

- **Python Developer**

  Freelance

  Developing a Python-based projects, such as CV projects, chat-bots, etc.

🏂 Other experience

- **President of the Student Senate**

  Sirius University

- **Volunteers coordinator and events organizer**

  Coordinator in St.-Petersburg City volunteering center, coordinating teams of volunteers from 5 to 30-40 people on such events as EURO2020, Red Sails, IRONMAN Triathlon, etc.

- **Head of the Students union 'PolyMakers'**

  Head of the students union 'PolyMakers' in the Peter the Great St.-Petersburg Polytechnic University based - taking care of organizing events, communicating with the administration, and leading the union members

- **Sportsman**

  Climbing, snowboarding, table tennis, also yoga, free-diving and general fitness.

🧩 Projects

- **Closed-Source projects (can be discussed on the interview)**

  - Estimating a tennis ball trajectory using the only one static camera to teach manipulators play tennis
  - Surveillance system - WorldSkills winning project, based on YOLOv4 and SORT tracking
  - Skincare Telegram Bot - A bot for the telegram which can analyze your skin conditions and advice you skincare products which you need, based on TensorFlow for a dialog processing
  - Autonomous navigation algorithm for the following robot - University graduating project, based on ROS, allow a robot to follow the particular person with using object detection & tracking, gestures recongition, path planning algorithms, etc.
  - EMG Sensors - Electo-MyoGraphy sensors for the prostheses and overall control systems application

- **Open-Source projects**

  - E-Board Receiver - The firmware for the receiver in the DIY electric longboard based on STM32 and NRF24L01+