# Denis Bakin

Sept 2022 – Present

July 2023 - Present

#### ♥ Moscow, Russia ◀ dfbakin ☑ denis.bakin5@gmail.com ♥ dfbakin

# About me \_\_

I am searching for an internship in computer vision and machine learning. As a motivated and detail-oriented student with a strong background in applied mathematics and programming, I love working on real-time computer vision projects and developing software solutions. I am always eager to learn, grow, and contribute to innovative projects in robotics and AI.

## Skills \_\_\_\_\_

Technologies: C++, Python, PyTorch, OpenCV, ROS2, Docker, Git, GitHub Actions

Languages: Russian (native), English (C1)

# Education \_\_\_\_\_

#### Higher School of Economic, Aplied Mathematics and Informatics

• Specialization: Machine Learning and Applications

# Professional experience \_\_\_\_\_

#### HSE Robotics Laboratory, Student 🗹

- Worked on computer vision project "Handy" to detect and track table tennis ball in realtime
- Implemented a CI pipeline with GitHub Actions for the Lab's projects

# Projects \_\_\_\_\_

### Handy GitHub 🗹 • Team project for HSE Robotics Laboratory to detect and track table tennis ball in real-time • Tools Used: Python, OpenCV, PyTorch, ROS2 • Implemented a pipeline to read, syncronize and publish images from high-speed cameras Developed a calibration pipeline to obtain intrinsic parameters and perform stereo calibration (pinhole camera model was used) • Developed a visualization tools for the project (official **C** and full **C** demo) TouchAndGo GitHub 🗹 High school graduation project aimed at helping visually impaired individuals navigate public spaces • Developed a calibration pipeline for both internal and external calibration of a stereo camera pair • Generated depth maps from the stereo pair to simulate basic 2D "Lidar" data, which was then used to control vibrating motors on a wearable belt • Tools Used: Python, OpenCV, Raspberry Pi, and minor hardware modifications Teaching \_\_\_\_\_ Sept 2024 – Present HSE Lyceum, Computer Science Teacher · Designed and developed a variety of programming problems Created comprehensive teaching materials and resources to support student learning Prepared and conducted exams to assess student understanding and progress · Assisted in developing programming problems for the enrollment examination process Private Practice, Tutor Sept 2022 - Present Mathematics, programming and computer science tutor for high school students

• State exam preparation for high school students