Denis Bakin

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→ dfbakin

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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

Sept 2022 - Present

• Specialization: Machine Learning and Applications

Professional experience _____

HSE Robotics Laboratory, Student ✓

July 2023 - Present

- 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 intrinsics parameters and perform stereo calibration (pinhole camera model used)
- Developed a visualization tools for the project (official ∠ and full ∠) 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 _____

HSE Lyceum, Programming Teacher

Sept 2024 - Present

- 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 Tutor

- Mathematics, programming and computer science tutor for high school students
- State exam preparation for high school students

Sept 2022 - Present