TOAN NGUYEN

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See more in https://ngtoanrob.github.io

About me: A Robotics and AI student at ITMO University, one of Russia's top institutions, with a strong foundation in theoretical mechanics and artificial intelligence. As a National Physics Olympiad medalist, I understand how physics empowers robotic systems, bridging analytical precision with AI-driven adaptability. My passion lies in developing intelligent, physically grounded robots that seamlessly interact with the real world.

SKILLS

- Proficiency in programming languages: Python, Matlab, Java
- Knowledge of robot kinematics and dynamics
- Control theory: Linear and Non-linear control, Adaptive and Robust control
- Experience with ROS framework and Linux
- Understanding of AI principles, knowledge of Machine learning, Deep learning in NLP and CV

PERSONAL PROJECTS

OMNI Car   **07/2024**

- **GitHub:** https://gitlab.com/NgToanRob/yandex-robotics-final-solution
- **Descriptions**: Developed and deployed a ROS-based project on real hardware for the final stage of the Yandex Robotics Olympiad.
- **Tech stack:** ROS, Python, C++

Implement Video vision transformer   **12/2022**

- **GitHub:** https://github.com/NgToanRob/ViVit-a-Pytorch-implementation
- **Descriptions:** Using ViViT model to solve challenge liveness detection in Zalo AI contest in 2022.
- **Tasks in the team:** Research the theory of ViViT architecture, model optimization methods such as Stochastic depth, Random augment, Label smoothing
- **Tech stack:** Pytorch

Implement from scratch YOLO   **12/2022**

- **GitHub:** https://github.com/NgToanRob/Yolov1-pytorch-implement
- **Descriptions:** Implement YOLO model from scratch using Pytorch
- **Tech stack:** Pytorch

Build a python completed app server   **08/2022**

- **GitHub:** https://github.com/NgToanRob/Django-AppServer
- **Descriptions:** Free some APIs to manage data from drone with restfull api on Django framework. Using PostgreSQL to make database and caching data on redis. Deploy to a Linux server using nginx. Use docker compose to compact the process.
- **Tech stack:** Django, PostgreSQL, Redis, Docker, Docker compose

ACTIVITIES AND WARDS

- **Gold medal in the Russian Federal Student Robotics Olympiad, organized by Yandex**   **07/2024**
- **Third prize in the competition: Vietnam National Excellent Student in Physics**   **02/2019**

EDUCATION

Saint Petersburg   **ITMO University**   **10/2021 – Now**

- Major: **Robotics and Artificial Intelligence**
- Fully Scholarship

Ho Chi Minh City   **Ho Chi Minh City University of Technology**   **9/2020 –04/2021**

- Major: **Mechatronics**
- **Top 4** GPA of mechanical engineering faculty