

Graduation or Internship Assignment: (Photo) Realistic Robot Simulation in NVIDIA Isaac Sim

NVIDIA has a robot simulation framework called Isaac Sim. It provides GPU-enabled realistic physics simulation and also photo realistic simulation with ray tracing using RTX graphics cards.

The goal of this assignment is to import our own mobile robot model in Isaac Sim. Model (part of) our building in the simulation Run the robot with the Navigation package from ROS 2. We want to experiment with synthetic data generation. Therefore, the simulation should provide us with realistic images from the simulated cameras on the robot.

Task description

In this assignment, you start with an exploration of ISAAC SIM, import our robot model in ISAAC SIM, model our building and run photorealistic simulations of the robot and setup the navigation from ROS 2.



Practical Information

Student Profile: Creative Media and Game Technologies (CMGT), Applied Computer Science, Computer Science (HBO-ICT), Electronics, Mechatronics (with interest in software aspects of robotics)

Duration: February 2022 – July 2022

Compensation: 230 euro per month, before taxes

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