Robotic manipulation powered by AI for agile warehouses and stores







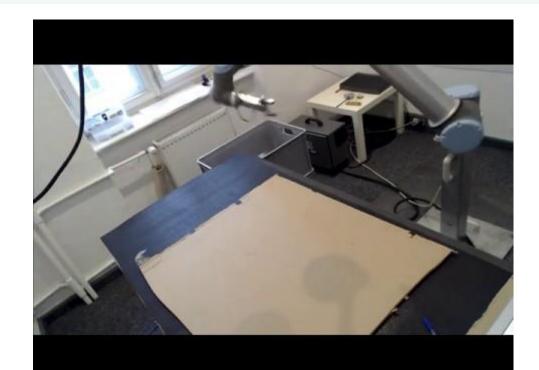
Controlling the manipulator

- We use ROS and UR10
- Mostly linear movements (joint space, Cartesian space)
- But also Movelt! planned movements.
 - We tried: <u>https://github.com/ThomasTimm/ur_modern_driver</u>.
 - Following a trajectory requires 125Hz communication via TCP
 - **Problem**: things go wrong when packages are lost or delayed

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Our contribution

- New open source driver for UR: <u>https://github.com/NoMagicAi/ur_driver</u> by Jarek Potiuk, Filip Grządkowski and Konrad Banachowicz
- Coarse positions (20-40 points) are sent to the UR controller
- The interpolated steps traversed at the 125Hz rate are computed directly on the UR controller
- **Result**: smooth movement, even over wifi.

Obviously, we are hiring.



