Robotic manipulation powered by AI for agile warehouses and stores
Manipulation is core to order fulfillment.
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Controlling the manipulator

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

- Following a trajectory requires 125Hz communication via TCP

- **Problem**: things go wrong when packages are lost or delayed
Our contribution

- New open source driver for UR: https://github.com/NoMagicAi/ur_driver 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.

marek@nomagic.ai
Marek Cygan