

# Laser odometry

- Using scans from the scans.npy file, reconstruct robot trajectory using frame-to-frame and keyframe approaches
- Compare results with ground-truth data from poses.npy
- Fine-tune ICP and keyframe parameters to achieve better precision
- Build occupancy grid map using trajectory acquired with keyframe approach

# Keyframe approach

- Remember initial pose and scan as a keyframe
- For each scan:
  - Perform  $dx = \text{ICP}(\text{scan}, \text{keyframe\_scan})$  and remember the resulting pose ( $\text{keyframe\_pos} + dx$ ) as a position for given scan
  - If  $dx$  is bigger than the given threshold, set current scan and position as a new keyframe