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Jackal Swarm rescue | Quad Chart

Overview <ul style="list-style-type: none">→ A swarm of Clearpath Jackal robots which navigate towards an object and rescue it by pushing it to the goal position.	Methodology <ul style="list-style-type: none">→ Working on ROS1 and robot path planning algorithms to navigate the robots.→ Using laser sensor on bot for obstacle detection and avoidance.
Algorithm <ul style="list-style-type: none">→ A* algorithm for path planning (OMPL library BSD3 licence).→ First robots in a swarm surround the object and start pushing it towards the goal.→ Safety checks on each step to avoid collision. ROS master controls all nodes	Expectations <p>Final package will contain</p> <ul style="list-style-type: none">→ Complete c++ source code (Open source BSD3)→ Doxygen documentation→ Project UML, class dependency diagram→ Test cases with results→ ReadMe with clear installation steps