

# Tony Najjar

## Senior Robotics Software Engineer

I am a generalist ROS2 roboticist with 5+ years of experience across the the whole robotics autonomy stack.



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## WORK EXPERIENCE

### Senior Robotics Software Engineer

#### Angsa Robotics

01/2024 - Present

Munich, Germany

##### Achievements/Tasks

- Leading the architecture for the autonomy stack as well as the core development of the critical modules
- Implement the software tooling necessary for a successful robotics product (CI/CD, containerization, visualization, logging, connectivity...)
- Mentor colleagues with ROS2, robotics algorithms, SW best practices...

### Senior Robotics Software Engineer

#### Pixel Robotics

09/2021 - 01/2024

Munich, Germany

##### Achievements/Tasks

- Developing software for AMR over a wide range of the autonomy stack: navigation, localization, behavior, control, perception, drivers, tooling, simulation...
- Porting Non-ROS codebase to ROS2 (launch system, architecture, open-source contributions, etc...)
- Generate and lead larger technical refactoring with junior engineers

### Robotics Deployer - Operations Engineer - Operation Center Lead

#### Magazino GmbH

08/2019 - 09/2021

Munich, Germany

##### Achievements/Tasks

- Establishing and leading [Magazino's Operations Center](#) for remotely monitoring and troubleshooting Magazino's robot fleet of 15+ robots over 3+ locations
- Deployment and integration of production-grade autonomous robots in unstructured environment
- Troubleshooting of failures over the whole autonomous robot stack: Reasoning, Navigation, Perception, Grasping

### Robotics Software Engineer Intern

#### BMW - Logistics Robotics

07/2018 - 12/2018

Munich, Germany

##### Achievements/Tasks

- Developed a maintainable, modular and generic state machine for the automated palletizing of different box sizes. Tech stack: ROS, Python, SMACH, UR10 [Sortbot](#).

### Robotics Research Intern

#### CERN & Lebanese American University

06/2017 - 08/2017

Geneva, Switzerland

##### Achievements/Tasks

- Mechanically and electrically designed a magnetic field-resistant inspection mobile robot for the CMS cavern

## SKILLS

ROS2

Navigation2

ros2\_control

robot\_localization

Gazebo

Python - Advanced

C++ - Intermediate

Linux

Git

Docker

Jira

Modern SW Dev. Practices

CI/CD

Open Source

Github Actions

## OPEN SOURCE CONTRIBUTIONS

### Tricycle Controller [↗](#)

- Created and contributed the mobile base tricycle controller to [ros2\\_controllers](#)

### Navigation2 [↗](#)

- Active open-source contributor to the navigation2 ROS2 project

### ROS2 Open-source contributor

- Contributed to numerous ROS2 packages such as: STVL, [costmap\\_converter](#), [gazebo\\_ros2\\_control](#), [rclpy](#), [ros2\\_control](#), etc... [↗](#)
- Contributed with issues to ROS2 packages [↗](#)

## EDUCATION

### B.E. Mechatronics Engineering

#### Lebanese American University, Lebanon [↗](#)

09/2014 - 05/2019

CGPA: 3.65 (German System: 1.5)

## AWARDS

Winner of CERN's International Webfest (2017) [↗](#)

3rd in AUB's Build-It Hackathon (2016) [↗](#)

3rd in Engineering Scholarship Competition, LAU (2014)

Winner of the CS Summer Institute, LAU (2013)

2nd in Google-sponsored CS4HS contest in UOB (2011) [↗](#)