



JORDI GONZÁLEZ

Software Engineer

I am a Software Engineer with high interests in **Computer Vision** and **Machine Learning** applied to autonomous vehicles. I have worked on **Multiple Object Tracking** and **Visual SLAM** during my second year of the master in Autonomous Systems at the company Mobile Industrial Robots A/S.

PERSONAL

ADDRESS: Odense 5000, Denmark

DATE OF BIRTH: 01-04-1996

PLACE OF BIRTH: Sant Quirze del Vallès, Catalunya, Spain.

CONTACT

PHONE:

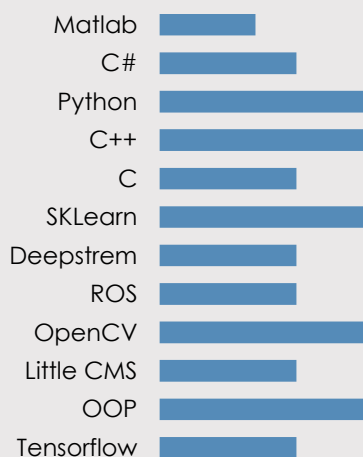
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SKILLS



LANGUAGES

Spanish: **Native**

Catalan: **Native**

English: **C1 Cambridge Certificate**

EDUCATION

Aalborg University / Technical University of Denmark

Master in Autonomous Systems

September 2018 – August 2020

Involved in projects where I worked with **ROS** to build an **AGV** from scratch, **Computer Vision** and **Machine Learning** in **Python** and in **C++**.

University of Twente

ERASMUS +

September 2016 – February 2017

I worked in a **Unity** game and a swarm of robots' simulation with **C++**.

Universitat Autònoma de Barcelona

Bachelor in Computer Science

September 2014 – February 2018

I focused on the areas of **Computer Vision**, **Machine Learning** and **Robotics**.

WORK EXPERIENCE

Mobile Industrial Robots A/S

Machine Learning Engineering

August 2020 – Present

I am currently working on **Multiple Object detection** and **Multiple Object tracking** using different tools from **OpenCV**.

Master Thesis

February 2020 – August 2020

The master thesis was about modifying an existing **Visual SLAM (ORB-SLAM)** system in **C++** to make it work with multiple cameras built on a MiR robot.

Internship

September 2019 – January 2020

Working with **Multiple Object Tracking** in order to improve the mapping and the localization of the mobile robots using the **Deepstream SDK** in **Python** and **C++**.

Copenhagen Business School

Student Assistant

March 2019 – August 2019

Student job consisting in **Educational Nudging**, **Statistics** and **Machine Learning**.

HP Inc

Student Software Engineer

February 2018 – June 2018

A 6 months internship consisting of researching the area of **Color Management** using **Machine Learning**, such as **regression** methods and different **Neural Networks** architectures.

SUMMARY

Dear Sir/Madame,

I am a Software Engineer with high interests in Computer Vision and Machine Learning applied to autonomous vehicles. I have worked on Multiple Object Tracking and Visual SLAM during my second year of the master in Autonomous Systems at the company Mobile Industrial Robots A/S. I am looking for new opportunities to grow in these fields.

In 2018, I finished my studies in Computer Science at Universitat Autònoma de Barcelona (UAB) where I learned Machine Learning and Robotics, and on August 2020, I finished the master in Autonomous Systems at Aalborg University at Copenhagen and Technical University of Denmark.

During the last 6 months of my bachelor, I worked in HP Inc, where I worked with Machine Learning for my bachelor thesis. I started to work with TensorFlow to develop the Neural Networks that I used in the project. At the beginning I had a lot of problems to know if I was going to the right way until I found a Network that worked almost perfect. Even I found a solution for the problem, I still think that I need more background for a better understanding. That's why I would like to put all this knowledge in practice and learn while I solve problems.

I am also really interested on Robotics which I think that what we need is a smart system, no more than us, that can cooperate with humans to do tasks more efficiency and with more precision. For example, a drone can be used for an autonomous inspection of a building in construction to inform the architects the state, in real time, of the building. To do the autonomous flight a Machine Learning Algorithm must run inside the Drone being able to detect and analyse the information.

In the 1st semester of my master, in a group of 5 members, we developed an AGV from scratch that has to move autonomously in a simplified warehouse. In order to solve this project, we develop optimization algorithms in order to find the shortest path, using graph theory, we were using **ROS** to create the network of communication to do all the different tasks, we also used the VICON system to localize the AGV into the space, and finally, we used **PID** controllers to control the motion of the AGV.

In this semester, I also worked with a Kobuki robot which had a robotic arm. By using the **SLAM** algorithm and the **Movelit** library, my team and I had to move the robot inside a room autonomously and pick a flag with the arm, which was localized using the VICON system.

During the second year of my master, I worked in the company where I am now employed as full-time Machine Learning Engineer and I work in a project from September 2019 until January 2020, where I was doing **Multi-Object Tracking** using **OpenCV**, a **NVIDIA Jetson** board, **CUDA**, **DeepStream SDK** and **C++**. I also worked on my master thesis that I finished on August 2020. The master thesis was about **Visual SLAM** at Mobile Industrial Robots A/S, where I had to adapt the **ORB-SLAM** algorithm to make it work with multiple cameras and I would like to extend my knowledge in this field and others related to Computer Vision and Robotics.

I am not an expert on this field yet, but with years and different projects and working with experts I expect to become an expert. I am really motivated to have new experiences and to learn new methods or learn deeper on the ones I already know.

Looking forward to hearing from you.

Best regards,

Jordi González Cano