NINO PEREIRA

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Enthusiastic engineer with more than 10 years of industrial experience working in highly innovative international companies and organisations (DYSON, European Patent Office, SAR, BOSH, BIAL) developing complex and robust systems in the field of electronics, software and robotics. Driven by challenging projects and working with a motivated team in stimulating environments.

Tehnical Summary

ADVANCED
- Algorithm development and Mathematical modelling
- C / C++ , Matlab, Python programming languages
- Motion Control, Trajectory tracking, Path Planning
- Computer Vision

INTERMEDIATE
- Machine Learning, Deep learning
- Sensor fusion
- Mapping and Localisation
- Object detection/recognition

LANGUAGES
- Portuguese (native), English (proficient), French (intermediate), Spanish (intermediate), German (A2)

Professional Experience

DYSON, LTD, MALMESBURY, UK
Advanced Robotics Algorithms Engineer, October 2014 – Present

- Lead algorithmic investigations in 5 areas including path planning, motion control, sensor arrangement, 3D simulation modelling and mapping;
- Research algorithmic solutions in 3 projects and develop prototype demonstrators;
- Present reports to management team about key enabler and risk areas of proposed algorithmic solutions;
- Work with the architecture team to identify functional requirements in 3 projects;
- Liaise with functional teams to define relevant domain strategies;
- Collaborate with test teams to define testing strategies for new algorithms;
- Work with relevant implementation domains early in the development lifecycle to ensure timely and complete knowledge transfer;
- Provide complete documentation and investigative support;
- Guide and mentor fellow algorithm engineers.

PATENT EXAMINER, THE HAGUE, HOLLAND
European Patent Office, October 2013 – October 2014

- Assessed over 20 patent applications in the field of computer devices and human interfaces;
- Provided detailed reports on state-of-the-art technologies and communicated with applicants on any objections to the grant of a patent;

UNIVERSITY OF GRONINGEN, GRONINGEN, HOLLAND
Guest Researcher, March 2013 – September 2013

- Developed several algorithms, simulations and advanced path planning methods such as TWIN-RRT* for mobile field robots;
- 2 publications;

SAR – SOLUÇÕES DE AUTOMAÇÃO E ROBÓTICA, GUIMARÃES, PORTUGAL
Project Developer, September 2006 – February 2013

- Investigated and implemented sensor-guided mobile robotics solutions for 2 innovative products;
- Performed mathematical modelling and algorithm development to achieve real-time sensor-guided robot motions;
- Developed software for computer vision, motion control and path-planning projects;
- Submitted 3 patent applications;
- Managed and coordinated an European Project Application with a consortium of 2 companies and a University as partners;
- Launched mobile robotics educational platform Bot'n Roll ONE.

Education

UDACITY INC, MOUNTAIN VIEW, CALIFORNIA, USA
Engineering Nanodegree on Self-driving Cars, October 2016 - Present

- Expanded skills through interactive projects in computer vision, robotic controls, localisation, path planning, machine learning, sensor fusion and others;
- Successfully completed 10 projects;

MIT PORTUGAL - UNIVERSITY OF MINHO, GUIMARÃES, PORTUGAL
PhD in Leaders for Technical Industries, October 2008 – January2015
Golf Ball Picker Robot: path generation in unstructured environments towards multiple targets

- Completed the MIT-Portugal doctoral program in Leaders for Technical Industries (LTI) within the Engineering Design and Advanced Manufacturing (EDAM) focus area;
- Successfully submitted projects within an Engineering Systems framework on Product Development, Systems Engineering, Product and Process Innovation, Complex Decision-making and Leadership;
- Thesis on the development of a mobile field robot with focus on new algorithms for path planning - "Golf Ball Picker Robot: path generation in unstructured environments towards multiple targets".

UNIVERSITY OF MINHO, GUIMARÃES, PORTUGAL
Licenciate Degree – Industrial Electronics and Computer Engineer, October 2001 – July 2006

- Gained competences in the domain of Electronics and Computers Engineering, namely design and implement electronic systems and/or devices in several specialization areas: Automation, Control and Robotics; Energy Systems; Computer Technology, Robotics and Telecommunication Systems;
- Joined the Automation and Robotics Laboratory research group and took part in several national and international robotic competitions on wheeled mobile cooperative robots.