João Manuel Pereira *March 3, 1995*

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Education

Instituto Superior Técnico   PORTUGAL
MSc in Computer Science, Major in Intelligent Robotics   *2018—2020*

Final grade: 17/20
Thesis: "Domestic Robot Grasping using Visual Servoing and Deep Learning"
Installed a robotic arm in a domestic mobile robot. Developed an object grasping mechanism using visual servoing and deep learning for visual feedback. Implemented in ROS.

Universidade Nova de Lisboa   PORTUGAL
BSc in Computer Science   *2013—2016*

Experience

Ocado Technology   UNITED KINGDOM
Software engineer, Simulation, Advanced Technology   *2021—present*

- Developed Unity-based simulation of robotic picking, predominantly in C#
- Created and improved simulation tools for robotics, mainly in Python
- Set and prioritized tasks based on internal client needs

Institute for Systems and Robotics - IST   PORTUGAL
Research assistant   *2019—2020*

Under a research grant, implemented robotic benchmarks to use in European Robotics League competitions. Additionally, developed software for the european project eurobench, a benchmarking framework for bipedal robots.

agap2 IT   PORTUGAL
Software engineer   *2016—2018*

- Worked with shipping solutions company Transsmart. Implemented connections to several courier APIs to book and track shipments.
- Developed a macOS application for DPD clients.

Skills

- Proficient in written and spoken English
- Good teamwork and technical communication skills
- Solid foundations in computer architecture, algorithms, data structures, databases and distributed systems
- Strong software development skills — most comfortable with Python, Javascript, Java, C++
- Knowledge of several important topics in robotics: control, mapping, navigation, kinematics, manipulation
- Experienced in ROS development, using both C++ and Python — including MoveIt! manipulation, Gazebo simulation, and other common ROS packages

Other Projects

Smart Cities Robotics Challenge Milton Keynes, UK
European Robotics League *2019*

Helped to organize, referee, and manage the audience visualization system for the Smart Cities Challenge 2019, a robotics competition at the centre:mk shopping mall in Milton Keynes.

Autonomous driving competition Portugal
Robotics festival 2019 *2019*

Developed autonomous car systems, including traffic-sign recognition and obstacle detection and avoidance, to compete in the autonomous driving competition of the Portuguese robotics festival.

MIUP/SWERC 2015 Portugal
College programming contest *2015*

Took part in MIUP 2015, a national college programming contest held at Universidade do Porto. Our team qualified for and competed in the Southwest Europe regional contest.

FCT NOVA Hackathon Portugal
Second place in college hackathon *2015*

Participated in the 2015 edition of the college hackathon and placed second. Our team developed a multiplayer Android game, based on an existing traditional board game.