
EDUCATION

The University of Edinburgh Scotland, UK
PhD in Robotics and Autonomous Systems *September 2017 - Present*

The University of Edinburgh Scotland, UK
Erasmus+ Exchange/Placements Programme *September 2016 - May 2017*
Bioinformatics 1 (A2), Extreme Computing (B), Robotics: Science and Systems (A3), Social and Technological Networks (C).

Faculty of Engineering at University of Porto Portugal
BSc/MSc in Informatics and Computing Engineering (16 out of 20) *September 2012 - July 2017*

EXPERIENCE

The University of Edinburgh Scotland, UK
Lab Demonstrator, Marker - Robotics: Science and Systems *1st Semester, 2017/2018*

- Responsible for a class of 28 MSc students, organized in groups of three;
- Helped students build, develop and program an autonomous robot made out of *LEGO* and electronic parts;
- Marked progress of lab projects throughout the semester and during two major milestones, and final practical report.

NASA's Valkyrie - Masters Dissertation (19 out of 20) *January - June, 2017*

- Worked with a world-class team of researchers at the University of Edinburgh on humanoid robots, namely NASA's Valkyrie.

Microsoft Portugal
Microsoft Student Partner *February - November, 2016*

- Helped establishing new connections between Microsoft and FEUP students by organizing events and workshops.

University of Porto Portugal
Research Software Engineer - [dokuwiki.github.io](https://github.com/dokuwiki/dokuwiki) *July - September, 2016*

- Developed a collaborative real-time editor *plugin* for DokuWiki;
- Improved existing DokuWiki plugins and packaged them in an installable bundle.

Full Stack Developer - [nutriciencia.pt](https://github.com/nutriciencia) *July - September, 2015*

- Planned and implemented a responsive online platform using *Laravel 5* along with a doctoral researcher and Professor at FEUP;
- Took part and actively collaborated with the project research team designer, nutrition specialists, and multimedia engineers.

Faculty of Engineering at University of Porto Portugal
Computer Laboratory Teaching Assistant *1st Semester, 2015/2016 and 2014/2015*

- Assisted a full-time Professor and taught Computer Laboratory classes, which are part of the Master in Informatics and Computer Engineering major curriculum;
- Lectured on concepts like object-oriented programming in ANSI-C, bash scripting, VESA graphic modes, and state machines;
- Wrote a series of tutorials regarding the development of a game from the very beginning, step by step, using Minix 3.1.8, to aid students taking the course - <http://difusal.blogspot.pt/2014/07/minix-posts-index.html>;
- Contributed to a 10% increase in the number of approved students, statistics show. Also contributed to increase the quality of the students' final projects.

Computer Graphics Teaching Assistant *2nd Semester, 2014/2015*

- Taught two Computer Graphics classes and assisted their respective full-time Professor. The course is part of the Master in Informatics and Computer Engineering major curriculum;
- Took part of a small team of teachers and students who are actively developing *WebCGF* - a WebGL graphics library - which is being used in the course.

RELEVANT SKILLS

github.com/ferrolho

Advanced user of: C, C++, Java.

Intermediate user of: Python, Laravel, PHP, HTML, CSS, SQL, OpenGL, WebGL, JavaScript, libGDX, Allegro, Swing, ANTLR.

Basic user of: Assembly, Bash Scripting, Scheme, Prolog, CoffeeScript, Play Framework, \LaTeX .

Languages: Portuguese (native), English (fluent), Spanish (intermediate), Chinese (beginner).

PUBLICATIONS

Y. Yang, W. Merkt, **H. Ferrolho**, V. Ivan, and S. Vijayakumar, "Efficient humanoid motion planning on uneven terrain using paired forward-inverse dynamic reachability maps," *IEEE Robotics and Automation Letters*, vol. 2, no. 4, pp. 2279–2286, 2017.