FABIO PARDO

fabio.pardo@imperial.ac.uk
12 Prince's Gardens, London SW7 1NA, UK
+44 7577 029794
linkedin.com/in/fabiopardo
French nationality / born March 23, 1991

RESEARCH INTERESTS

I am interested in designing artificial agents able to learn a wide range of skills with minimal a priori knowledge. My current research lies in continuation of DQN, A3C, DDPG, NAF, TRPO, GPS, UNREAL and FuN, combining Reinforcement Learning and Deep Learning.

➤ Reinforcement Learning, Deep Learning, Unsupervised Learning, Artificial Intelligence, Robotics.

EDUCATION

2016 – present

PhD in Computer Science
@ Imperial College, Robot Intelligence Lab, London *with Dr. Petar Kormushev and Pr. Andrew Davison*
➤ Deep Reinforcement Learning for robot control.

2014 – 2015

Master's degree in Computer Science ★ with honors
@ Pierre et Marie Curie University, Paris
➤ Artificial Intelligence, Machine Learning and Robotics.

2012 – 2014

Master's degree in Cognitive Science ★ with honors
@ ENS Ulm (École Normale Supérieure), EHESS and Paris Descartes University, Paris
➤ Computational Neuroscience, Brain Modeling, Machine Learning, Experimental Psychology, Philosophy, Social Science, Logic, Linguistic, Functional and Anatomic Imaging.

2009 – 2012

Bachelor's degree in Computer Science ★ with honors
@ Pierre et Marie Curie University, Paris
➤ Theories and applications in all Computer Science fields.

RESEARCH INTERNSHIPS

March 2015 – September 2015

Deep Reinforcement Learning for autonomous robot navigation
@ National Institute of Informatics, Inamura Lab, Tokyo *with Pr. Tetsunari Inamura*
➤ A variant of DQN (Google DeepMind's Deep Q-Network agent) is used to learn how to control the wheels of a virtual mobile base robot in order to reach a target in a maze using the raw image coming from a first person view camera.

September 2013 – June 2014

Multimodal concepts emergence for a humanoid robot in interaction with a human tutor
@ Inria / ENSTA ParisTech, FLOWERS team, Palaiseau *with Pr. David Filliat*
➤ A humanoid robot (Meka M1) learns, through interactions with a human, the concepts of shape and color. A Non-negative Matrix Factorization (NMF) algorithm is used to extract a dictionary of multimodal recurrent patterns. The tutor can point objects and give a description or test the learning by asking one. The robot's curiosity also guides the tutor to the less known objects through gaze.
★ My work has been presented as a poster at *the Mechanisms of Learning in Social Contexts* workshop at the ICDL-EpiRob 2015 conference.

June 2013 – September 2013

Homeostatic engine for reinforcement learning agents
Optimal decision making based on a mixture of prediction experts
@ Inria / AgroParisTech, MIA unit, Paris *with Dr. Laurent Orseau (now at DeepMind)*
➤ An agent learns how to combine some predefined policies in order to handle internal variables, like the lack of energy and the CPU usage.
➤ An agent learns how to combine the predictions about future observations, made by some experts, to take optimal decisions.
☛ It has also been an opportunity for me to learn fundamental theories for Artificial General Intelligence, such as Kolmogorov complexity, Solomonoff induction and Universal Artificial Intelligence.

February 2013 – June 2013

Ontology visualization methods and their impact on the humans capacity for memory
@ UPMC, Lip6 ACASA team, Paris *with Pr. Jean-Gabriel Ganascia*
➤ We compared the effects on humans memory of various ways to represent ontologies such as indented lists, graphs and memory islands, a spatial representation similar to a web mapping.

MISCELLANEOUS

2016 – 2017

Graduate Teaching Assistant
@ Imperial College, London
➤ Computing and Robotics.

2016

2 technical interviews for a Research Engineer role at Google DeepMind
➤ Machine Learning, Computer Science, Mathematics, Statistics

2015

7 technical interviews for a Software Engineer role at Google
@ Google Paris and Zurich
➤ Algorithms, Programming and Machine Learning.

2011 and 2012

Twice finalist of the French national Artificial Intelligence contest, Prologin
@ École Polytechnique and EPITA, Palaiseau and Paris
➤ Artificial Intelligence, Algorithms, 36 hours of Programming.