

Final Report on the Faculty Exchange Program of

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at Carnegie Mellon University

This report concerns my visit to the Robotics Institute, School of Computer Science, Carnegie Mellon University, hosted by Fernando De La Torre, Fall 2012.

During this visit I accompanied two courses, both of them on Machine Learning, i.e., the 10-601 (for undergraduate) and the 10-701 (for graduate students). Course 10-601 responsible is Tom Mitchell. Course 10-701 is of the responsibility of Eric Xing. Accompanying these two courses allowed me to apprehend, among other facets, the several differences and similarities on the organization and pedagogical practice of the different course topics, level of theoretical detail, student's projects, and homeworks, between an undergraduate and a graduate course on Machine Learning. Based on this experience, and on my own research activities in the field, I'll be proposing a graduate course on Machine Learning in my home Faculty.

Parallely, I pursued research on Clustering, especially on the application of the James-Stein estimator to Cluster Analysis. I obtained some preliminary, yet fundamental, results required to the work that I am currently developing. I meet and discussed with vary many interesting people, from faculty to graduate students, I got some new and insightful ideas, and not only from my field of research, that will be very useful in my ongoing research work, and will certainly boost my international research activities.

Also, I took the opportunity to attend (some of) the meetings of the Statistical Machine Learning Reading Group, the Machine Learning Futuristic Panel Discussion, and several of the many outstanding seminars and talks occurring at the Computer Science School (typically more than 1 seminar per week). From these, I would like to stress that I was lucky enough to attend the seminars of Rodney Brooks, one of the world's best known roboticists, that appeared on the cover of the IEEE Spectrum October 2012 issue with his low cost, user-friendly Baxter robot, and the seminar of Peter Norvig, currently Director of Research at Google, and one of the two authors of the leading text book *Artificial Intelligence: a Modern Approach*.

As a somewhat extra work plan activity, I kept my activities as journal associate editor, and graduate student supervisor.

There are many things that I really appreciated during this visit. First of all, the University's dynamism and organization. The research environment is truly inspiring. Moreover, I felt a deep level of mutual consideration between students and instructors. For a matter of illustration: classes start on time with no "academic tolerance" delays. There is no "background noise" in the classes. Student interventions in classes are informed and pertinent.

This visit was a great experience for me, that I fully recommend to other colleagues, and that I would like to repeat in the future.

I would like to thank FCT (the Portuguese Foundation for Science and Technology), Carnegie Mellon University, and the CMU Portugal Program, for supporting this visit.

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