



PASCAL 2 Bootcamp 2010 - Report

Bootcamp URL: <http://bootcamp.lif.univ-mrs.fr>

The PASCAL 2 Bootcamp in Machine Learning was held in Marseilles, at the Saint-Charles campus of the Université de Provence, from the 5th to the 13th of July 2010.

The bootcamp aimed at providing a solid foundation and hands-on experience in machine learning and related areas, and its intended audience was senior undergraduate schools with outstanding record and first years Ph.D. students working, mostly (but not necessarily) from PASCAL sites. We are happy to report that applications started arriving at a steady rate as soon as the call was distributed among PASCAL sites.

Over 70 complete applications were received (30 additional persons created an account on-line but did not send a recommendation letter), of which 45 were accepted. Of course all the 19 candidatures from a PASCAL site were accepted – though some were concerning third year students who should not have been concern by the event. 44 students finally did attend the workshop.

The following eight researchers agreed to act as lecturers in the bootcamp (roughly in order of intervention):

- Introduction to Machine Learning : Iain Murray, University of Edinburgh
- Probability and Mathematical Needs : Sandrine Anthoine, CNRS
- Graphical Models : Cédric Archambeau, Xerox
- Kernel Methods : Liva Ralaivola, Aix-Marseille University
- ML for Natural Languages Processing:
 - Probabilistic Syntactic Models: Joan Andreu Sanchez, University of Valencia
 - Speech Processing: Georges Linares, University of Avignon
- On-Line Learning: Roberto Paredes, University of Valencia
- Grammatical Inference, Colin de la Higuera, University of Nantes.

Additional teachers intervened, mostly during lab sessions: Raphaël Bailly (LIF Marseille), Emilie Villaron (LATP Marseille) and Benjamin Mazza (LIA Avignon). Colin de la Higuera, Roberto Paredes, Alexis Nasr (LIF Marseille) and Rémi Eyraud (LIF Marseille) animated the panel session. As we do not find anyone to talk about clustering, we projected the 2 first hours of the lecture about that topic of the previous bootcamp (made by Ulrike von Luxburg) and Roberto Paredes kindly agreed to answer questions from participants on that topic.

The schedule was arranged so that themes had two half-days each (except grammatical inference), not not necessarily the same day. The courses stood from 8:00 to 12:30 (with a 30 minutes break) and from 14:00 to 18:30 (*idem.*). Each teacher had the choice about how to organize his time between lecture and practical session but we asked that not more than half of the time should be used for lecture. The detailed schedule is available from the bootcamp URL.

A panel session by the lecturers present at the moment, was held the second Monday afternoon. After a presentation from Colin de la Higuera about “Ethics and Strategy in Research“, the panelists discussed on several topics, including current active/interesting research lines in ML, their personal

experience on conducting research in ML, and general advice on how to focus one's research career (and specifically, how to do a Ph.D. in Machine Learning and life after Ph.D.).

All the lectures were video recorded, as usual in PASCAL, by the excellent service provided by VideoLectures.net. The recordings are available from the bootcamp URL.

At the end of the event, students were asked to fulfill a feedback form. The summary of their answers can be found in another files coming with this report.

Logistically, the Université de Provence provided the facilities (lecture rooms and computer labs), while PASCAL, the Université de la Méditerranée and the Université de Provence, provided the financial assistance for instructors travel and subsistence, most student subsistence (accommodation, breakfast, and lunch), and video recording.

The organisation committee was composed of the following members:

- Stéphane Ayache, *vice-president*
- Raphaël Bailly
- Frédéric Bechet
- François Denis
- Cécile Capponi
- Rémi Eyraud, *president*
- Amaury Habrard
- Pierre Machart
- Alexis Nasr
- Martine Quessada
- Liva Ralaivola
- Guillaume Stempfél

The scientific committee was composed of the following members:

- José Luis Balcázar, Universitat Politècnica de Catalunya
- François Denis, Université de Provence
- Rémi Eyraud, Université de Provence
- Colin de la Higuera, Université de Nantes
- Alexis Nasr, Université de la Méditerranée
- John Shawe-Taylor, University College London