# Weekly Report

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*Abstract*—**This week I mainly put my effort on treating Prof. Marcello, and taking the machine learning course.**

## I. MACHINE LEARNING COURSE

**T**HIS week we invited Prof. Marcello to give a class of machine learning and big data.

- Prof. Marcello is a professor of Computer Science at the University of Venice, Italy. He serves on the editorial boards of IEEE TPAMI. He has initiated several conferences series as Program Chair (EMMCVPR, IWCV, SIMBAD) and served as a General Chair for ICCV 2017 and will serve as a Area Chair for ECCV 2018. He is slao an IEEE Fellow and IAPR Fellow.
- This class includes basic concepts of machine learning, such as SVM, VC dimension, clustering. Since he is familiar with graph models and game theory, these parts are more intriguing.
- When introduce classes, foreign professors prefer to give us a historical view of these concepts. In this way, students can understand these notions better and can grasp these ideas in an intuitive way.
- About communication, since he is not a native speaker, so the speed is not fast. There is no problem of talking with him. Still, I need to enlarge my vocabulary to be more fluent.

There are some slides that impressed me a lot. Fig. 1 is the bias question. Fig. 2 is the adversarial sample.

**The question of bias**

«So, what is the value of current datasets when used to train algorithms for object recognition that will be deployed in the real world?

The answer that emerges can be summarized as: "better than nothing, but not by much".»

Antonio Torralba and Alexei Efros
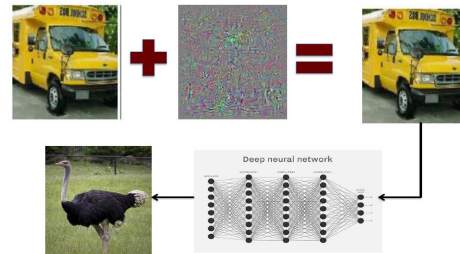*Unbiased look at dataset bias* (2011)

Fig. 1: Bias question

**High accuracy = high robustness?**

Fig. 2: Adversarial sample