

# Internship proposal

Weeds classification using high resolution aerial images from a digital camera mounted on unmanned aerial vehicles (UAVs)

## **Introduction**

The use of new technologies in agriculture has developed considerably in recent years (sensors of remote sensing, robots, mapping tools, agricultural equipment ...). The applications mainly concern the modulation of nitrogen fertilization, irrigation or yield forecasting, but very little weeding. Weed control, particularly in field crops, is a recurring problem and farmers' expectations for new weed control solutions are high.

This internship is part of the thesis *Detection and characterization of weeds by aerial imagery for precision agriculture*. The aim of the thesis is to use unmanned aerial vehicles (UAVs) images to detect, locate, identify, and target specific weeds in field crops.

## **Objective**

This internship takes place in the third part of this thesis, that is to say the identification of the weeds. The objective of this internship is to use feature learning based approach for weed classification using high resolution aerial images from a digital camera mounted on a UAV or drone.

**Keywords:** weed classification; UAV remote sensing; Deep Learning; Precision agriculture

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