

PROJECT OBJECTIVES:

EMPATHIZE:

In this techniques have profoundly transformed our ability to extract information from visual data. AI techniques have been applied for a long time in

security and industrial domains, for example, in iris recognition or the detection of

faulty objects in manufacturing.

They were nevertheless only recently made more widely accessible after their use

in smartphone apps for face recognition and song identification.

Combined with increasing access to cloud-based computation, AI

techniques can now automatically analyze hundreds of thousands of visual data

every day.

APPLICATION OF AI:

To biological recording have to date typically focused on active sampling,

that is, images collected specifically for the purpose of recording wildlife (e.g.,

wildlife recording apps or camera traps). However, this has neglected large

amounts of image data that are not collected for the purposes of biological

recording, but which nonetheless may contain useful information about biodiversity.

This includes social media imagery(e.g., Flickr and Instagram), CCTV, and

imagery collected along linear infrastructure (e.g., Google StreetView). These

unexploited image data could be rapidly analyzed using “AI naturalists” designed to

locate potential images of biodiversity and classify what they see.

HIGHLIGHTS:

- AI image classifiers can create biodiversity datasets from social media imagery.
- Flickr hosts many images of plants; some can be accurately classified to species by AI.
- Images are spatially aggregated around tourist sites and under-represent native species.
- Images focused on a single, non-horticultural, plant are most reliably Identified.

Technical Architecture :

