Flower Classification

by Noble Tang

Business Understanding

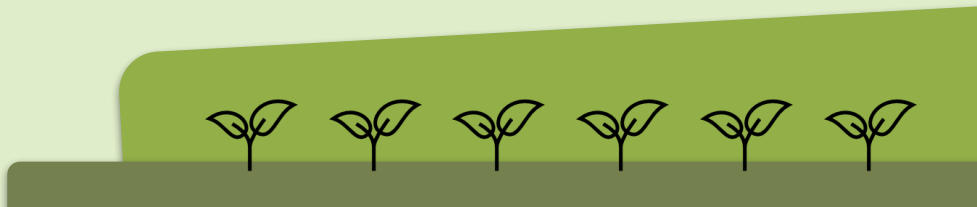
Data Understanding

Training

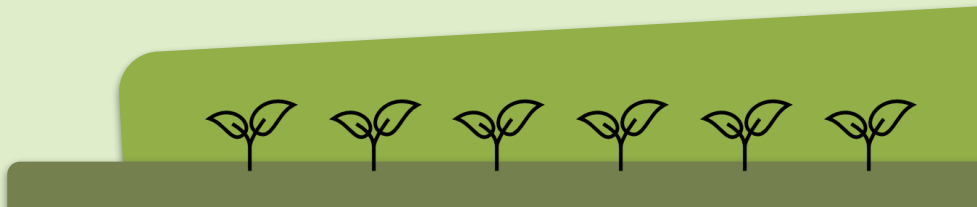
Results

Suggestions

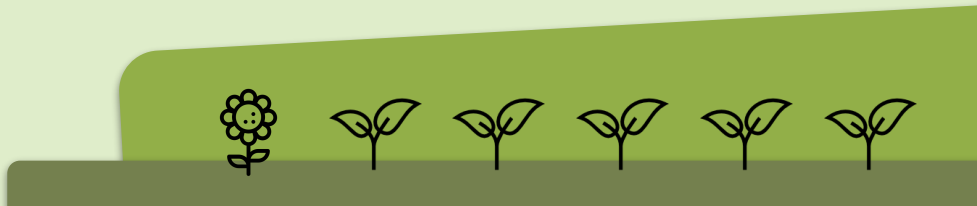
Future Research



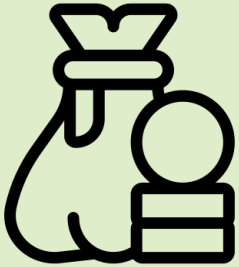
Classifies nearly 100 different species

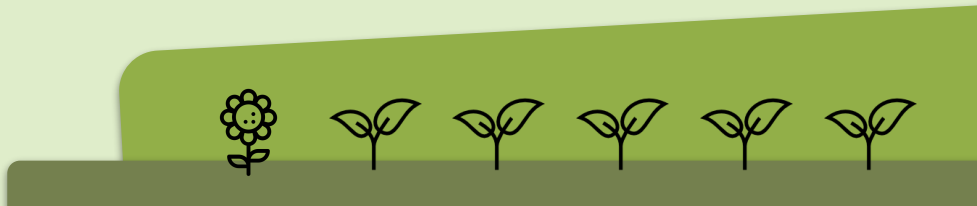


Business Problem



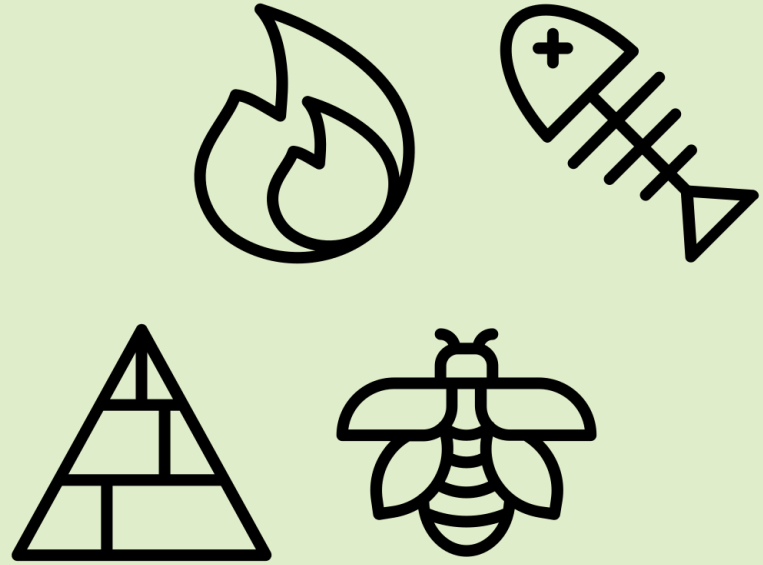
Flaws of current scouting methods





Invasive species endanger existing ecosystems

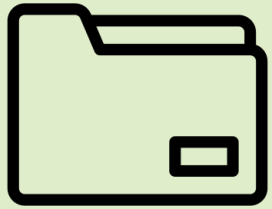
- Can be hard to identify
- Fire risk
- Reduce biodiversity
- Easily spread
- Estimated $120B annually



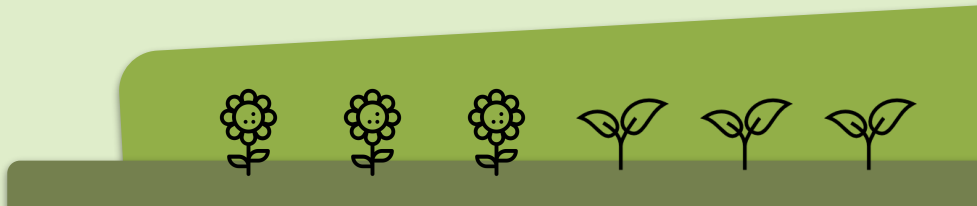
Data Understanding

Over 400,000 different plant species

- 117 invasive plants in North America
- Over 11,000 images
- Limiting to 96 species
- Provided by Kaggle competitions

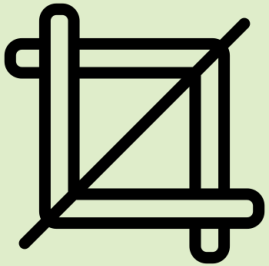


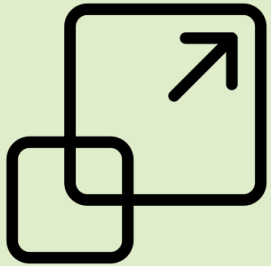
Training



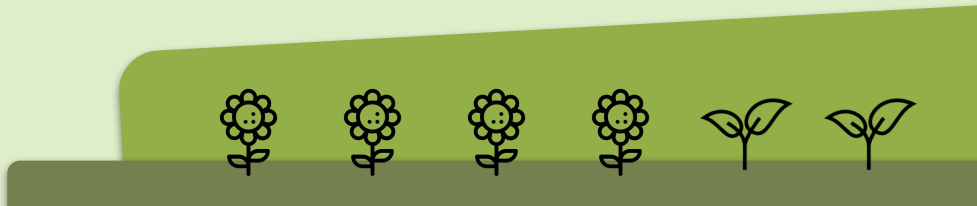
Trained a model with thousands of images

- Augment images
- Convolutional Neural Network
- Focus on accuracy improvement



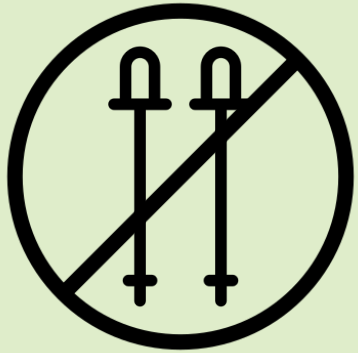


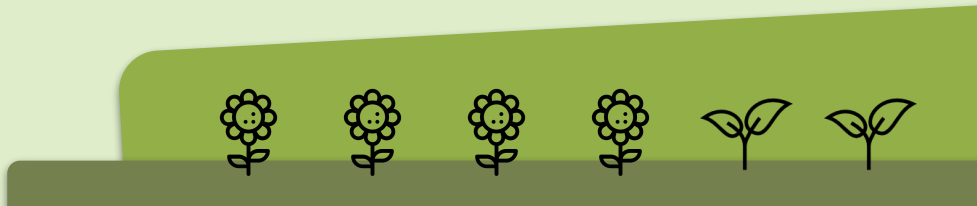
Results



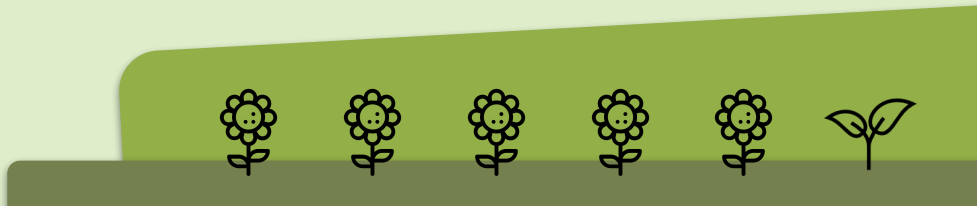
Identifies flowers with 31% accuracy

- Alternative to manual classification
- Stick to trails
- Reduce injury risk

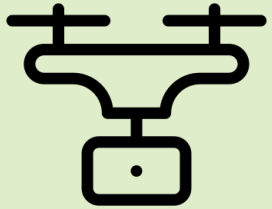




Suggestions



Safely identify plants from remote footage

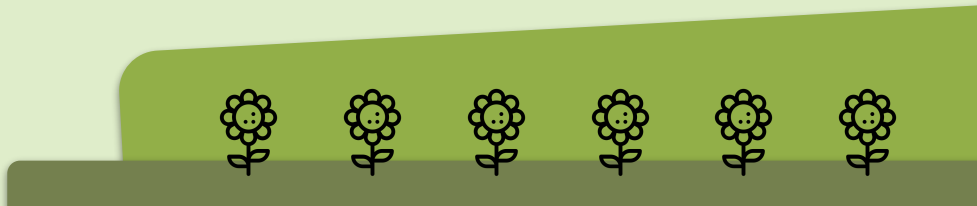


Scout

Identify

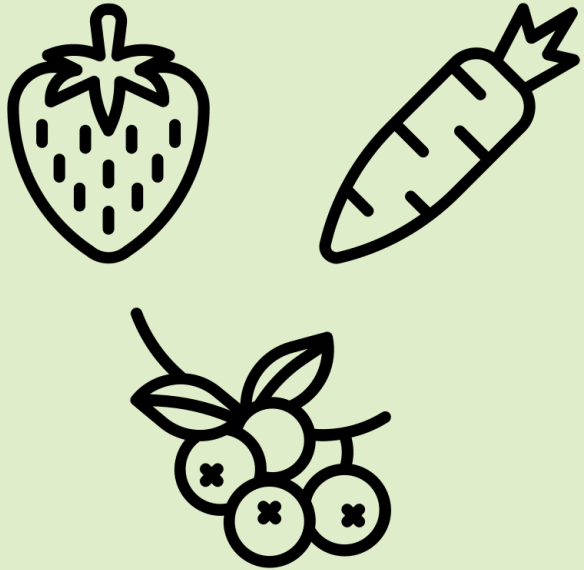
Remove

Future Research



The model has many applications

- Images with different angles
- Recognition with other vegetation
- Fund and train model



Thanks!

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