WILD
EDIBLES
with "Wildman" Steve Brill

# The Mushroom Detector

## Avoiding Death by Fungus

Anthony Palumbo-Principal Data Scientist

# Situation

- Mushrooms are everywhere

- Too many different types to categorize directly

-Not easy to tell what kind of mushroom it is just by looking at it



**Michael Lambert**
★ ★ ★ ★ ☆  July 11, 2017

Liked it until I got the images download issue. Please fix. Just uninstalled/reinstalled. Still not working.

**Nicholas Wayne**
★ ☆ ☆ ☆ ☆  December 14, 2018

Trying to download images the app will not open.

# Opportunity

-Mushrooms are very common

**Chris Maddock**
★ ★ ★ ★ ★ November 22, 2016

**Chris Maddock** Totally useless. Search function doesn't work and no UK plants! Can I get my money back?
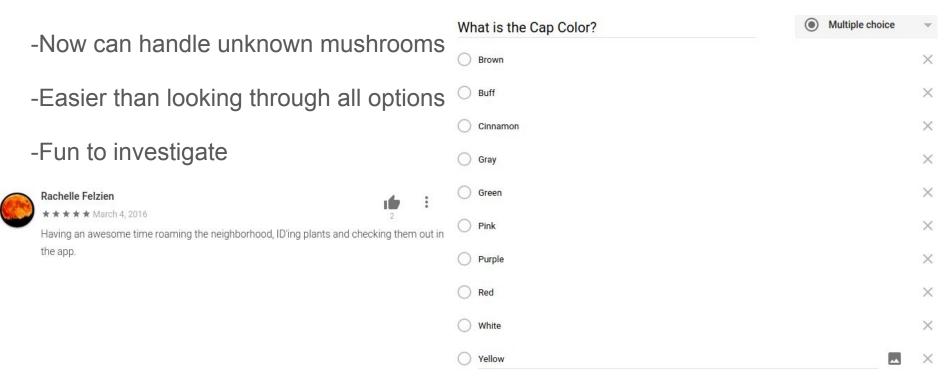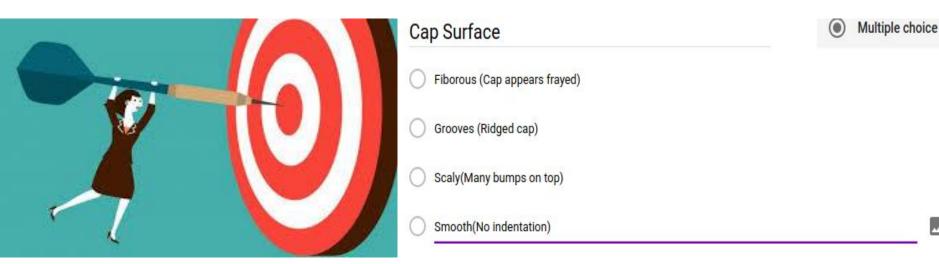
**Doug Eller**
★ ★ ★ ★ ★ August 30, 2016

I was disappointed to find out the Southeast isn't included. So I paid $4.99 for something that doesn't help me. When will the Southeast be included? I'll change this to 5 stars when it is.

# New App Feature!

-Now can handle unknown mushrooms

-Easier than looking through all options

-Fun to investigate

**Rachelle Felzien**
★ ★ ★ ★ ★ March 4, 2016

Having an awesome time roaming the neighborhood, ID'ing plants and checking them out in the app.

👍
2

What is the Cap Color?                                    ⊙ Multiple choice ▾

○ Brown                                                                ✕

○ Buff                                                                   ✕

○ Cinnamon                                                        ✕

○ Gray                                                                 ✕

○ Green                                                               ✕

○ Pink                                                                  ✕

○ Purple                                                             ✕

○ Red                                                                  ✕

○ White                                                              ✕

○ Yellow                                                   🖼   ✕

# Features of the Addition

-Survey that asks about the features of the mushrooms

-Explanation of each of the variables
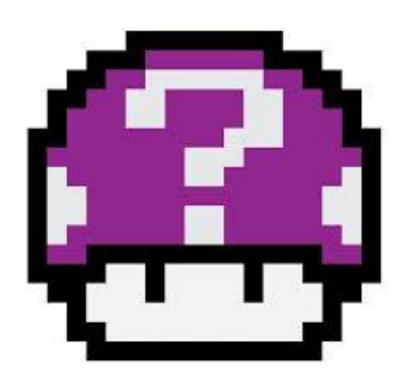
- > 99.9% accuracy on a sample of over 1600 mushrooms!



Cap Surface                                    ◉ Multiple choice

○ Fiborous (Cap appears frayed)

○ Grooves (Ridged cap)

○ Scaly(Many bumps on top)

○ Smooth(No indentation)

# Request

-We can do this for other things too

- Get more data for other plants

Wally ----------------------------->

# Questions?

# Confusion Matrix

|  | Actual Poisonous | Actual Edible |
|---|---|---|
| Predicted Poisonous | 800 | 1 |
| Predicted Edible | **0** | 824 |

Accuracy = 99.94%

# ROC/AUC(Receiving Operator Characteristic/Area Under Curve)