



The Mushroom Detector

Avoiding Death by Fungus

Anthony Palumbo-Principal Data Scientist

Recap of Current Product

- Show the picture along with an explanation
- Says whether or not the plant is edible



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... if you even can



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.

What is the Cap Color?

☐ Brown

☐ Buff

☐ Cinnamon

☐ Gray

☐ Green

☐ Pink

☐ Purple

☐ Red

☐ White

☐ Yellow

☒ Multiple choice



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

- ☐ Fibrous (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?



Feature Details-Confusion Matrix

	Actual Poisonous	Actual Edible
Predicted Poisonous	800	1
Predicted Edible	0	824

Accuracy = 99.94%

Feature Details-ROC/AUC(Receiving Operator Characteristic/Area Under Curve)

ROC/AUC: 1.0000 \approx Perfect

