Mushroom Toxicity

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Mushrooms

According to Wikipedia

A **mushroom** or **toadstool** is the fleshy, spore-bearing fruiting body of a fungus, typically produced above ground, on soil, or on its food source.

There are many mushrooms that are edible but there are many that are poisonous.

Tools Utilized

- Jupyter Notebook
- Python Pandas
- Python Matplotlib
- Python Seaborn
- HTML/CSS/Bootstrap
- Javascript D3.js
- Github Pages

Edible or Poisonous?

We explored this question by utilizing 2 different datasets

- Data gathered from the article **Reviewing the world's edible mushroom species: A new evidence‐based classification system at https://onlinelibrary.wiley.com/doi/full/10.1111/1541-4337.12708**

  Used to generate charts showing toxicity utilizing the scientific name

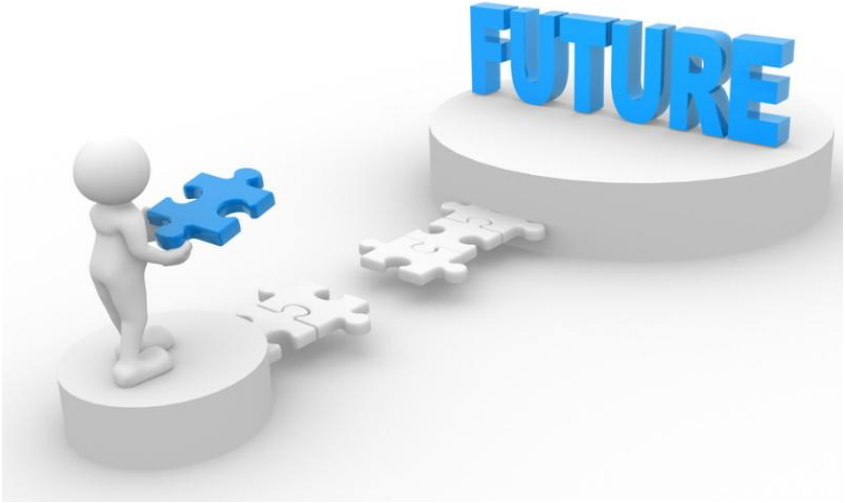
- Kaggle's **Mushroom Classification** Dataset https://www.kaggle.com/uciml/mushroom-classification

  Used to generate 3 machine learning models to predict mushroom toxicity

Difficulties Encountered

- Large Number of mushrooms that exist
- Common Name vs Scientific Name
- No scientific names or images included with the Kaggle data
- Complexity or finding pictures and matching to scientific name
- Varies websites with conflicting scientific names and information

Future Enhancements



We would like to add a feature that collects images of mushrooms utilzing the scientific name. We would also collect data that compares the scientific name as well as the common name and statistics about each mushroom. The images would then be utilized to train machine learning models to identify the scientific name of a mushroom image presented before displaying information about that mushroom including the common name and identifying whether to image of the mushroom was of one that is edible or not.