INeuron

MUSHROOM CLASSIFICATION

(MACHINE LEARNING)

HIGH LEVEL DESIGN

Project Member:

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Introduction: Mushroom Classification This project aims at developing a machine-learning algorithm that will determine if a certain mushroom is edible or poisonous by its specifications like cap shape, cap color, gill color, etc. using different classifiers.

Problem Statement: The Audubon Society Field Guide to North American Mushrooms contains descriptions

of hypothetical samples corresponding to 23 species of gilled mushrooms in the

Agaricus and Lepiota Family Mushroom (1981). Each species is labelled as either

definitely edible, definitely poisonous, or maybe edible but not recommended. This last

category was merged with the toxic category. The Guide asserts unequivocally that

there is no simple rule for judging a mushroom's edibility, such as "leaflets three, leave it

be" for Poisonous Oak and Ivy.

The main goal is to predict which mushroom is poisonous & which is edible.

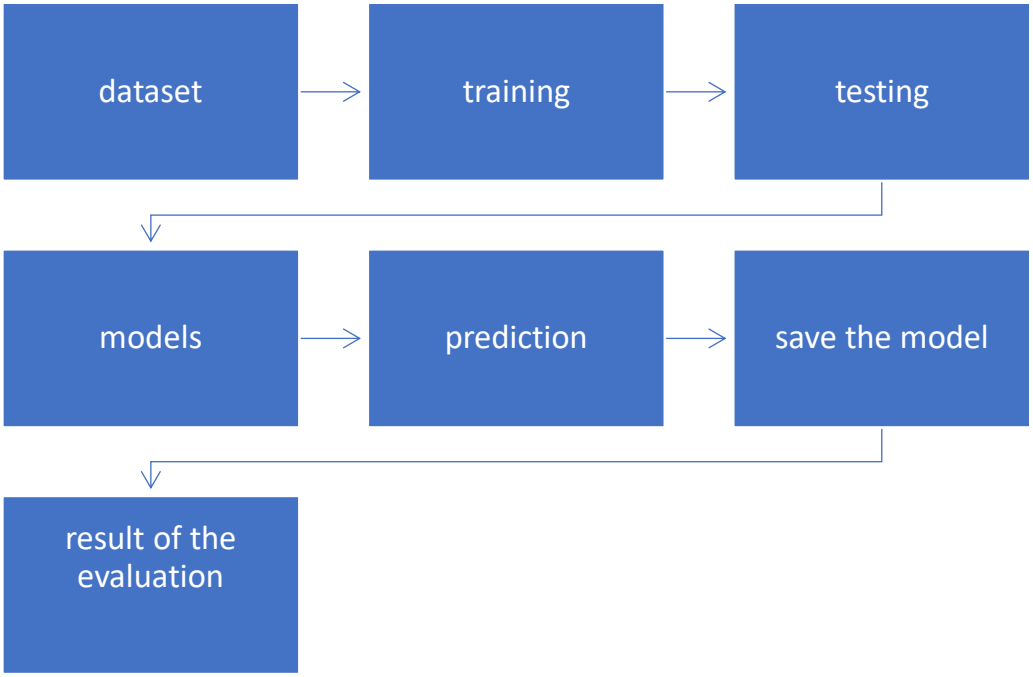
Approach: The classical machine learning tasks like Data Exploration, Data Cleaning,

Feature Engineering, Model Building and Model Testing. Try out different machine

learning algorithms that’s best fit for the above case.

Tools Used: Python, matplotlib, pandas, Numpy, Sklearn, tensorflow, plotly.

Design Flow:


dataset
training
testing
models
prediction
save the model
result of the evaluation