from sklearn.model\_selection import train\_test\_split

from sklearn.svm import SVC

import pandas as pd

# features = pd.read\_csv("./feature.csv")

# labels = pd.read\_csv("./labels.csv")

df = pd.read\_csv("./dataset.csv")

feature = df[['column1', 'column2']]

labels = df[['label']]

X\_train, X\_test, y\_train, y\_test = train\_test\_split(feature, labels, test\_size=0.33, random\_state=42)

svc = SVC(kernel="rbf", gamma=2.99, C=19)

svc.fit(X\_train, y\_train)

print(svc.score(X\_test, y\_test))

# y = svc.predict(X\_test)

# compare y to y\_predict

# give score back

from micromlgen import port

classmap = {0: "flying",

            1: "low\_activity",

            2: "feeding"}

c\_code = port(svc, classmap=classmap)

print(c\_code, file=open('./code.txt','w'))

print(c\_code)

{"sdocpz", "coryz", "sdx", "rangex"};

sdocpz is the standard deviation of the change of the z acceleration values (𝒛\_𝑖−𝒛\_(𝑖−1)).

coryz is the correlation (dependency) between y and z acceleration values.

sdx is the standard deviation of the x acceleration values.

rangex is the range of the x values (max to min)