import pandas as pd

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

from sklearn.ensemble import RandomForestClassifier

from sklearn.metrics import accuracy\_score

from sklearn.preprocessing import StandardScaler

from sklearn.decomposition import PCA

data = pd.read\_csv('employee\_data.csv')

features = data.drop('burnout', axis=1)

target = data['burnout']

X\_train, X\_test, y\_train, y\_test = train\_test\_split(features, target, test\_size=0.2, random\_state=42)

scaler = StandardScaler()

X\_train\_scaled = scaler.fit\_transform(X\_train)

X\_test\_scaled = scaler.transform(X\_test)

pca = PCA(n\_components=10)

X\_train\_pca = pca.fit\_transform(X\_train\_scaled)

X\_test\_pca = pca.transform(X\_test\_scaled)

model = RandomForestClassifier()

model.fit(X\_train\_pca, y\_train)

y\_pred = model.predict(X\_test\_pca)

accuracy = accuracy\_score(y\_test, y\_pred)

print(f"Model accuracy: {accuracy}")

new\_employee\_data = pd.read\_csv('new\_employee\_data.csv') # Assuming you have a CSV file with new employee data

new\_employee\_scaled = scaler.transform(new\_employee\_data)

new\_employee\_pca = pca.transform(new\_employee\_scaled)

new\_employee\_predictions = model.predict(new\_employee\_pca)

print("Predicted burnout for new employees:")

for i, prediction in enumerate(new\_employee\_predictions):

    print(f"Employee {i+1}: {prediction}")