

# Image Classification of Traditional Indian Clothing

Kelly Butler



Lehenga (the skirt)  
with a blouse and  
a dupatta

Nehru jacket



Women's mojaris



Saree



Men's kurta

# Business Problem

Data From Kaggle

Class Label	Number of Images
Women's Kurtas	11694
Sarees	10791
Blouses	9174
Leggings and Salwars	7787
Men's Kurtas	6951
Dupattas	6587
Nehru jackets	6491
Lehenga	5753
Gowns	5211
Petticoats	4441
Dhoti Pants	4145
Palazzos	3375
Women's Mojari's	3228
Sherwanis	2992
Men's Mojari's	2546

15 Class Labels

7500 validation images

7500 test images

91166 training images

# Newly Scrapped Test Data



500 images of  
each type



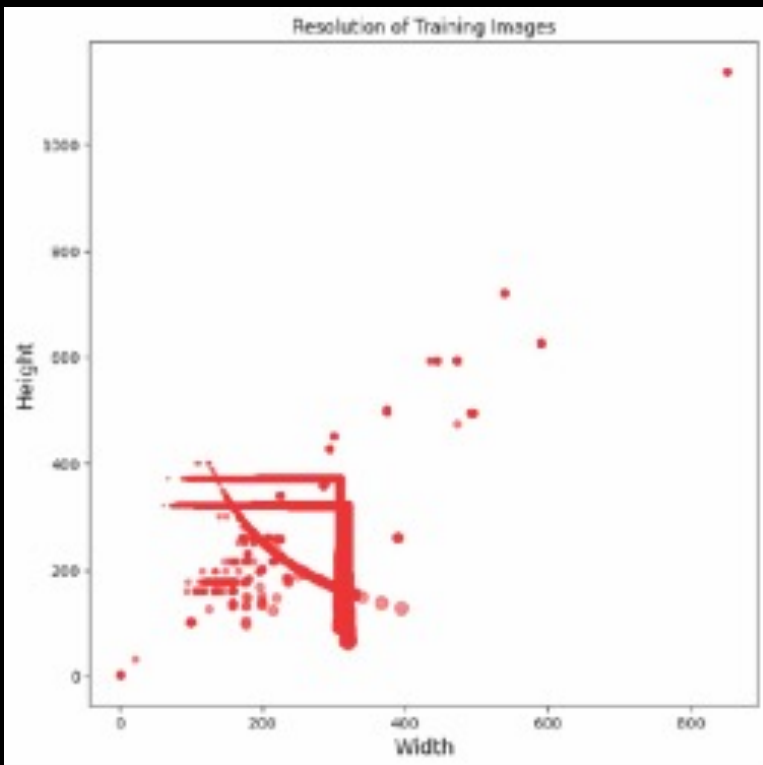


Image resolution in the training set

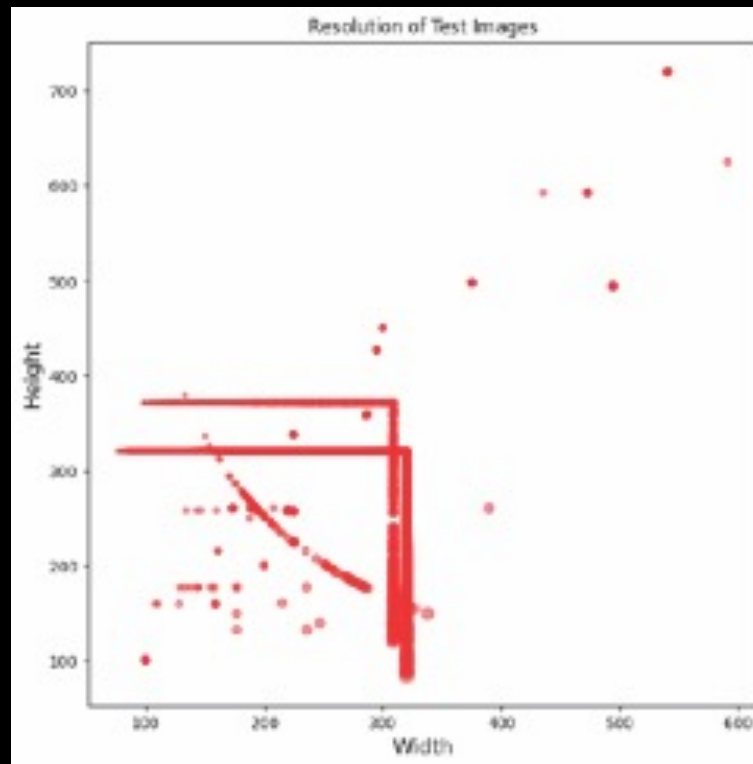


Image resolution in the test set

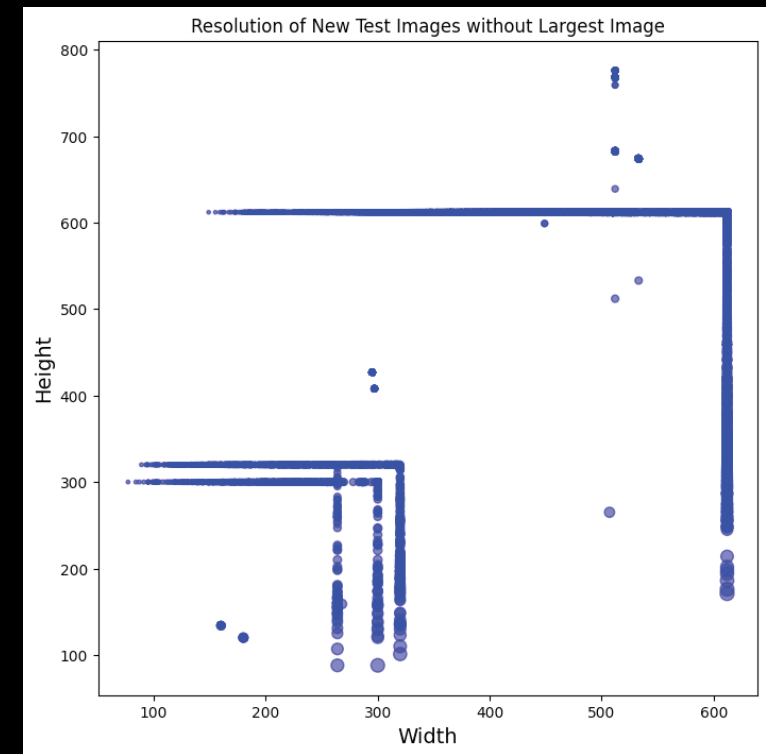
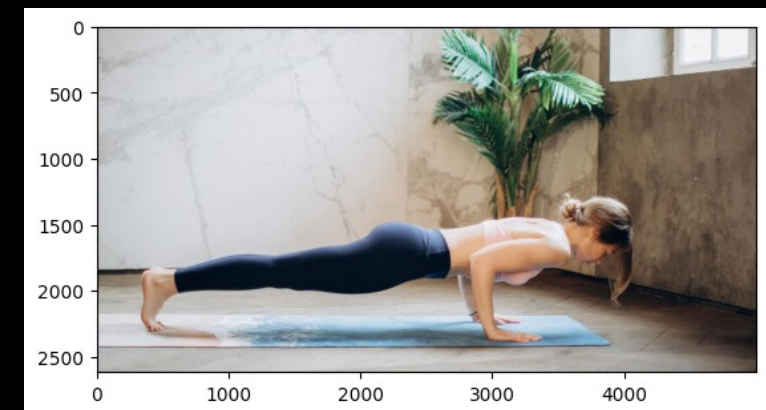
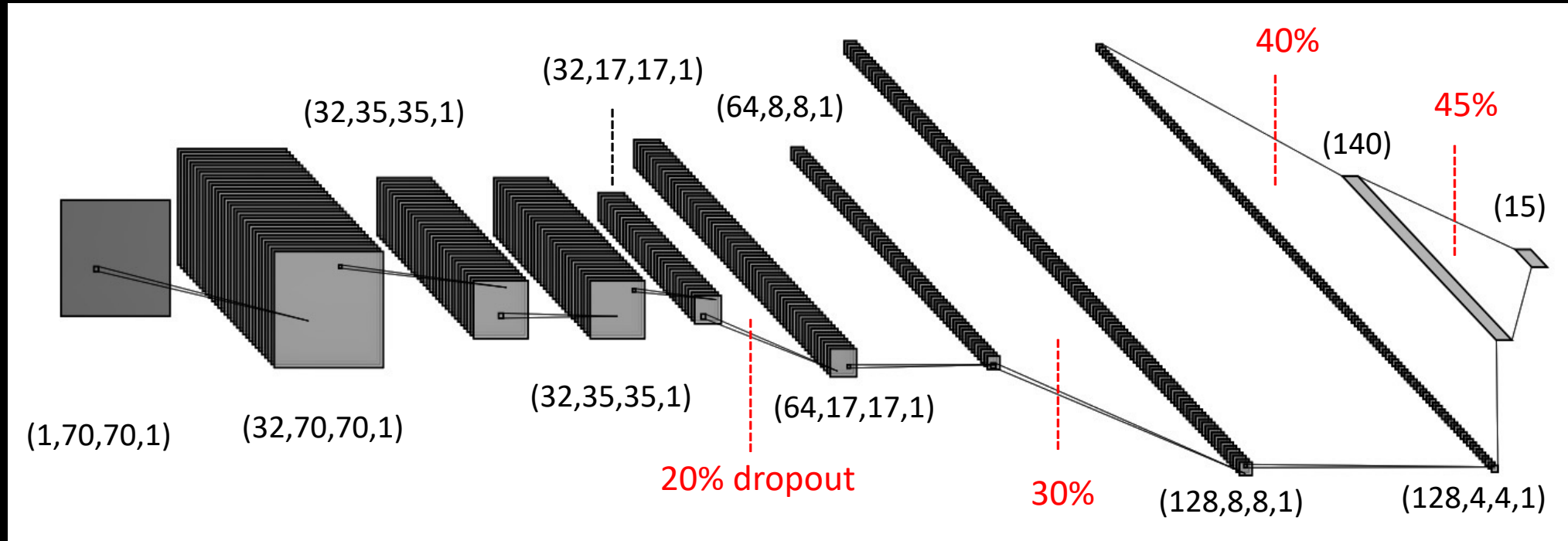


Image resolution in the new test set



Image Sizes





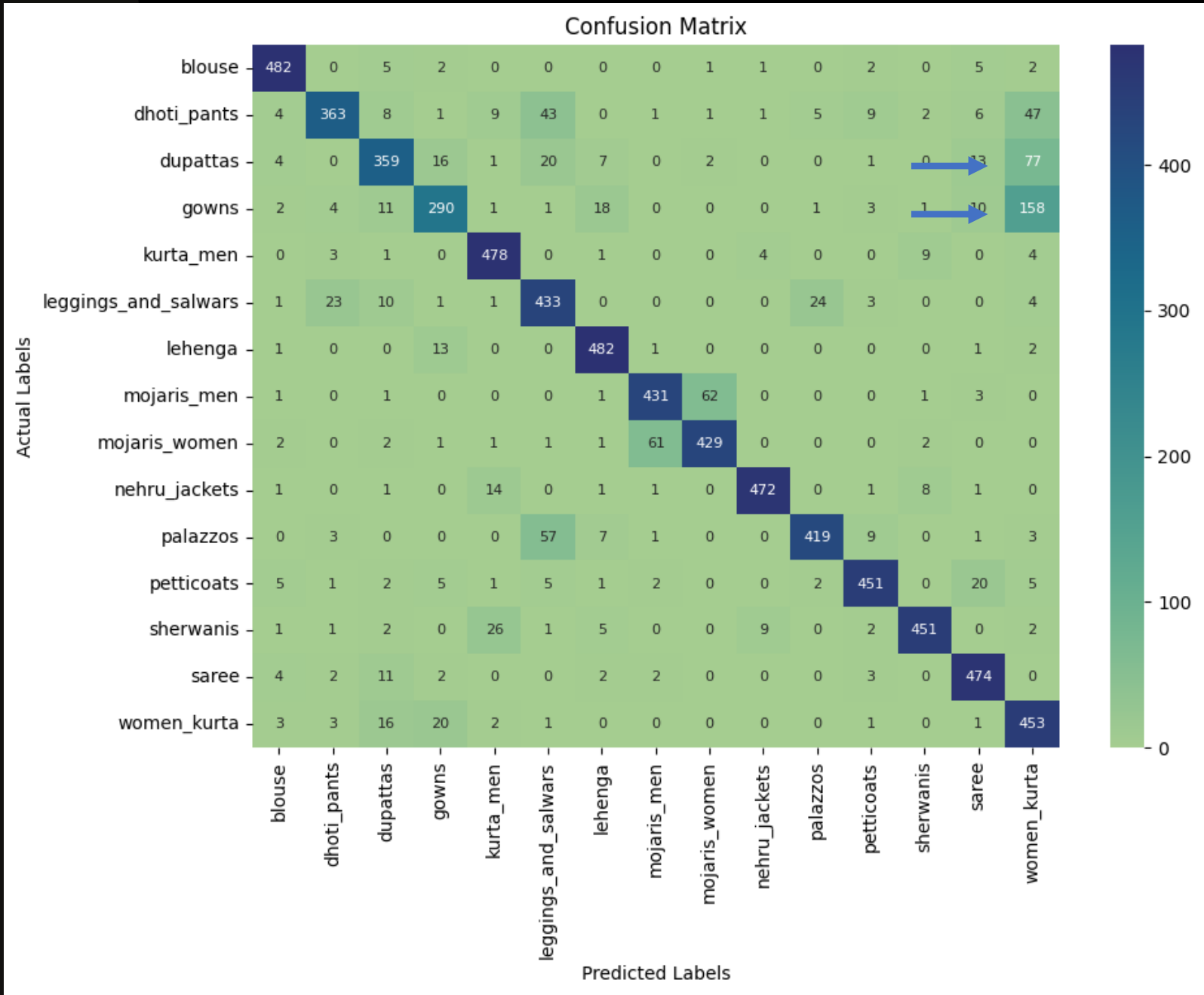
# Convolutional Neural Network

# Metrics

	Accuracy	Precision	Recall	F1 Score
Original test dataset	86.23 %	85.98 %	84.68 %	84.61 %
New test dataset	63.91 %	68.59 %	63.91 %	63.59 %

# Confusion Matrix

## Original Test Data





# Comparing Training and Test Images

Training set:  
Women's  
Kurta



Test set:  
Gown

Predicted label:  
Women's Kurta

# Comparing Training and Test Images

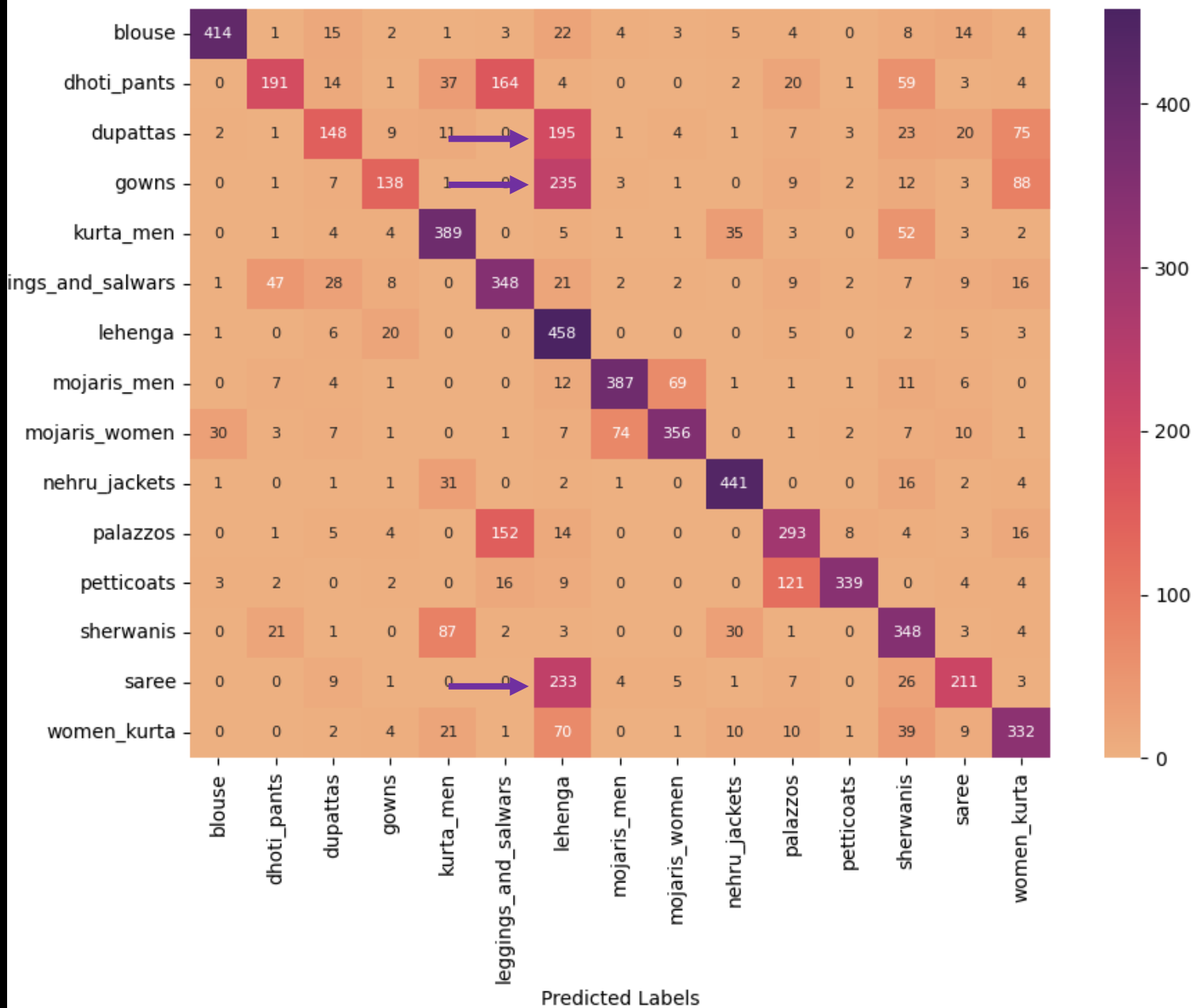


Training set  
Women's Kurta



Test set  
Dupatta  
Predicted:  
Women's Kurta

Confusion Matrix for New Test Data



# Confusion Matrix Newly Scraped Test Data



# Mis-labeled Images

Men's Mojari

Training Image  
Number

56696

Product Title

Ladies Jutti Women Jutti Women Mojari Tan

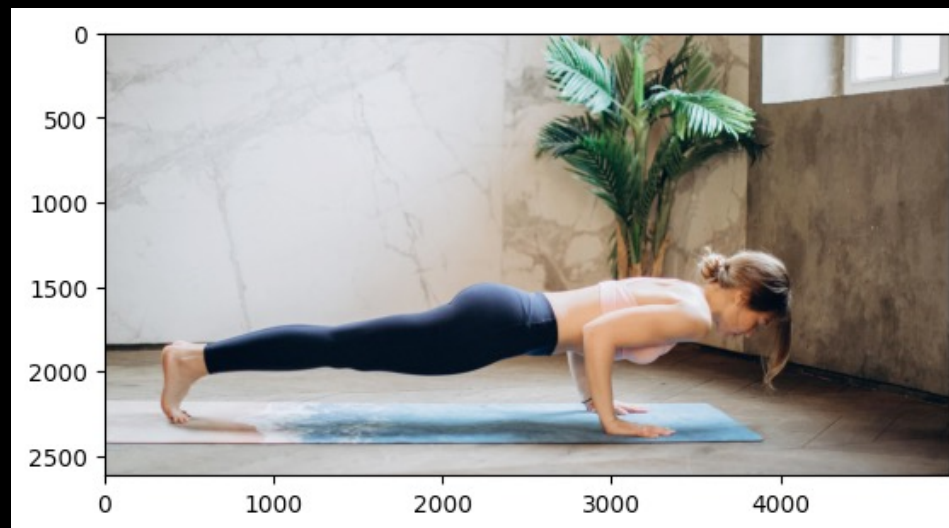


56958

Womens Mojari



# Business Insights





Women's  
kurta



Palazzos



Sherwani



Blouse



Gown



Dupatta



Salwar with  
dupatta



Dhoti pants



Men's  
mojaris