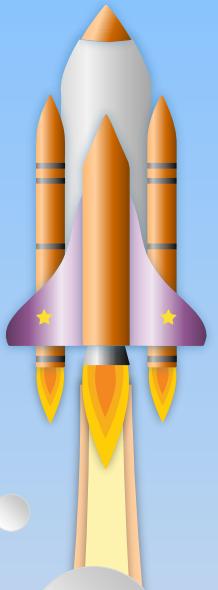




# DressMeUp

Athens University of Economics and Business  
MSc in Business Analytics  
Machine Learning & Content Analytics Course

# Agenda



- 01 The Problem
- 02 Our Solution
- 03 Data
- 04 Algorithms & Experiments
- 05 Results & Quantitative Analysis
- 06 Qualitative & Error Analysis
- 07 Discussion
- 08 Our Team



# The Problem

Problems Definition & why it interests people



# Problem: Environmental Risk

**92  
MILLION**

=



tons of **clothes-related waste**  
we discard **every year**

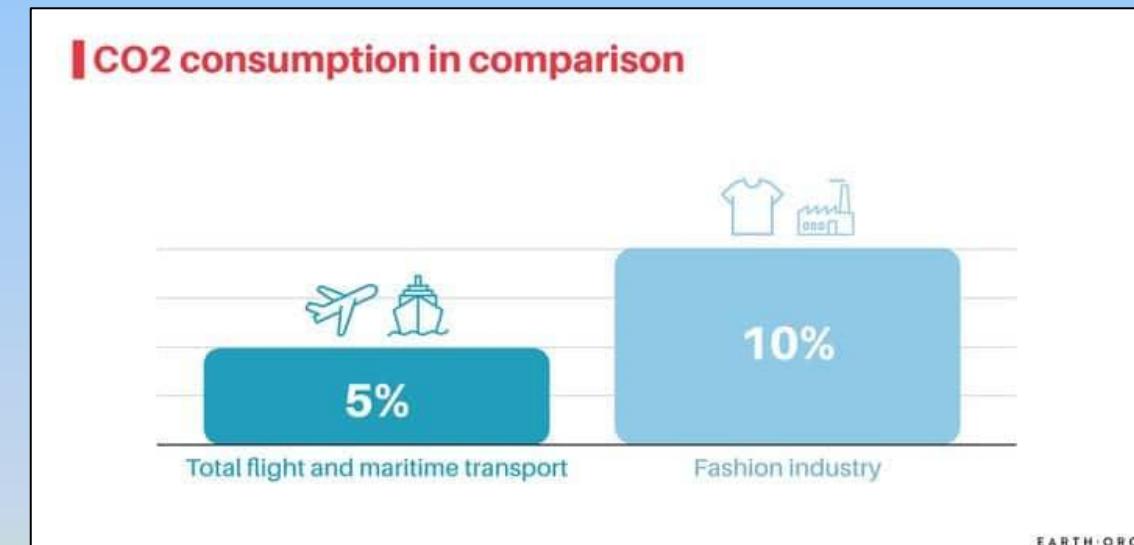
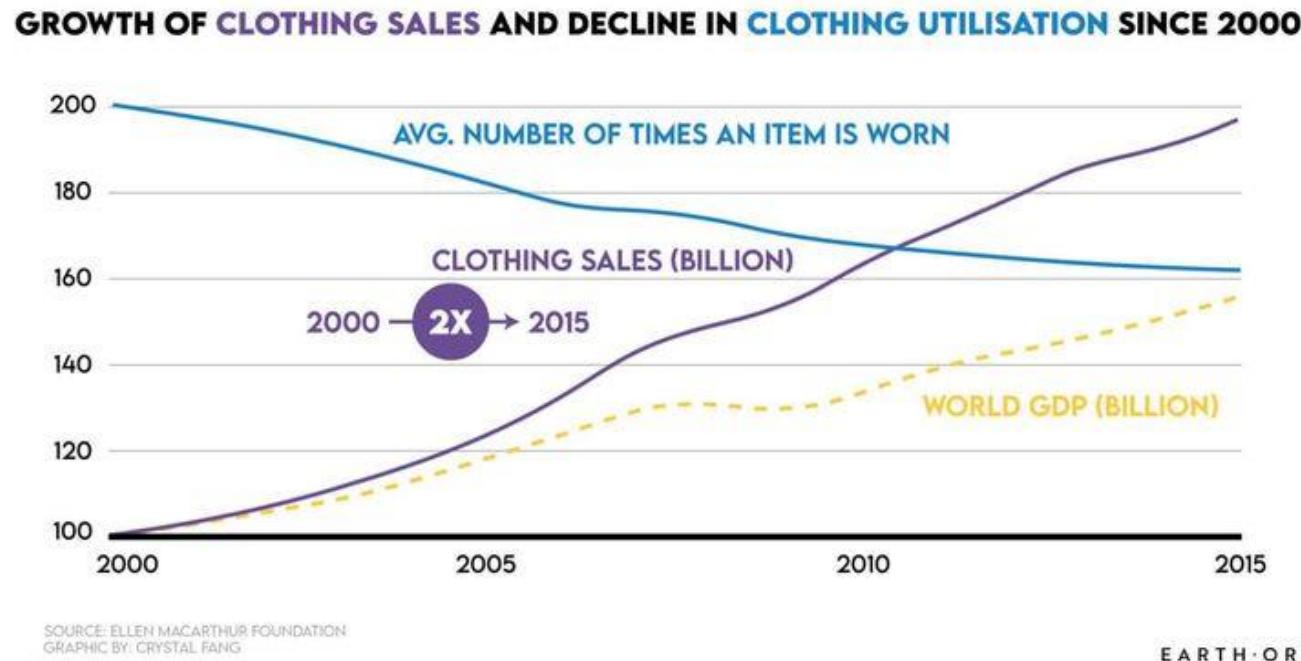
a garbage truck full of clothes either  
incinerated or sent to the landfill  
**every second**

=



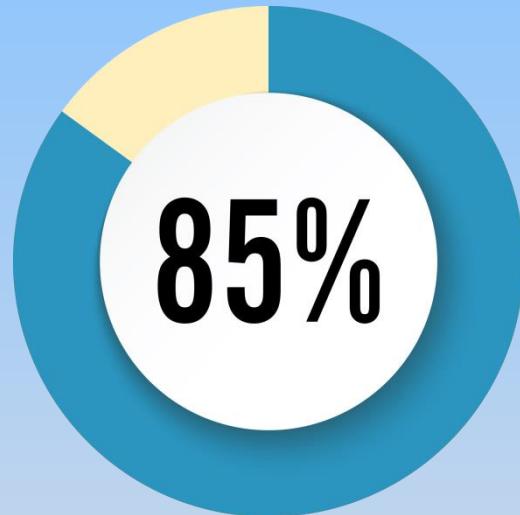
enough to fill one and a half  
Empire State Buildings  
**every day**

# Problem: Environmental Risk + World Economy Loss





# Problem: Environmental Risk + World Economy Loss + Individual Economy



**Women have clothes in their wardrobe that don't fit**

Source: <https://www.theguardian.com>



**Men and women's wardrobe clothes are not worn**

Source: <https://fashionunited.uk>



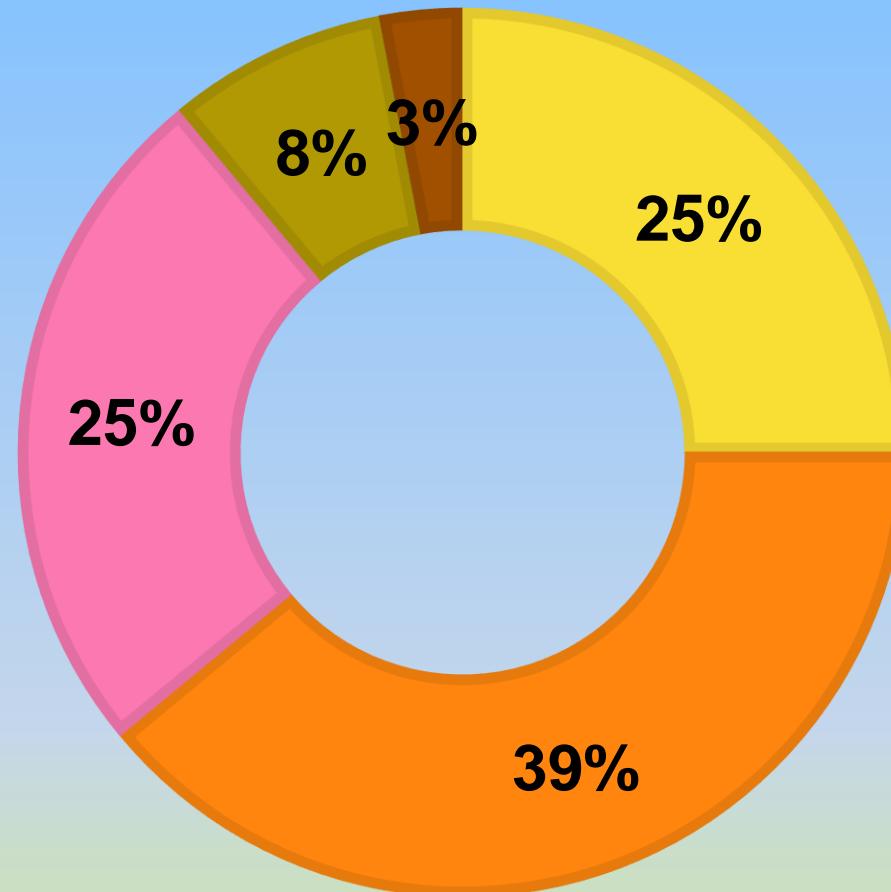
**Items of clothing at least on average are never worn**

Source: <https://www.mirror.co.uk>

# U.S. Consumers' Interest in Fashion

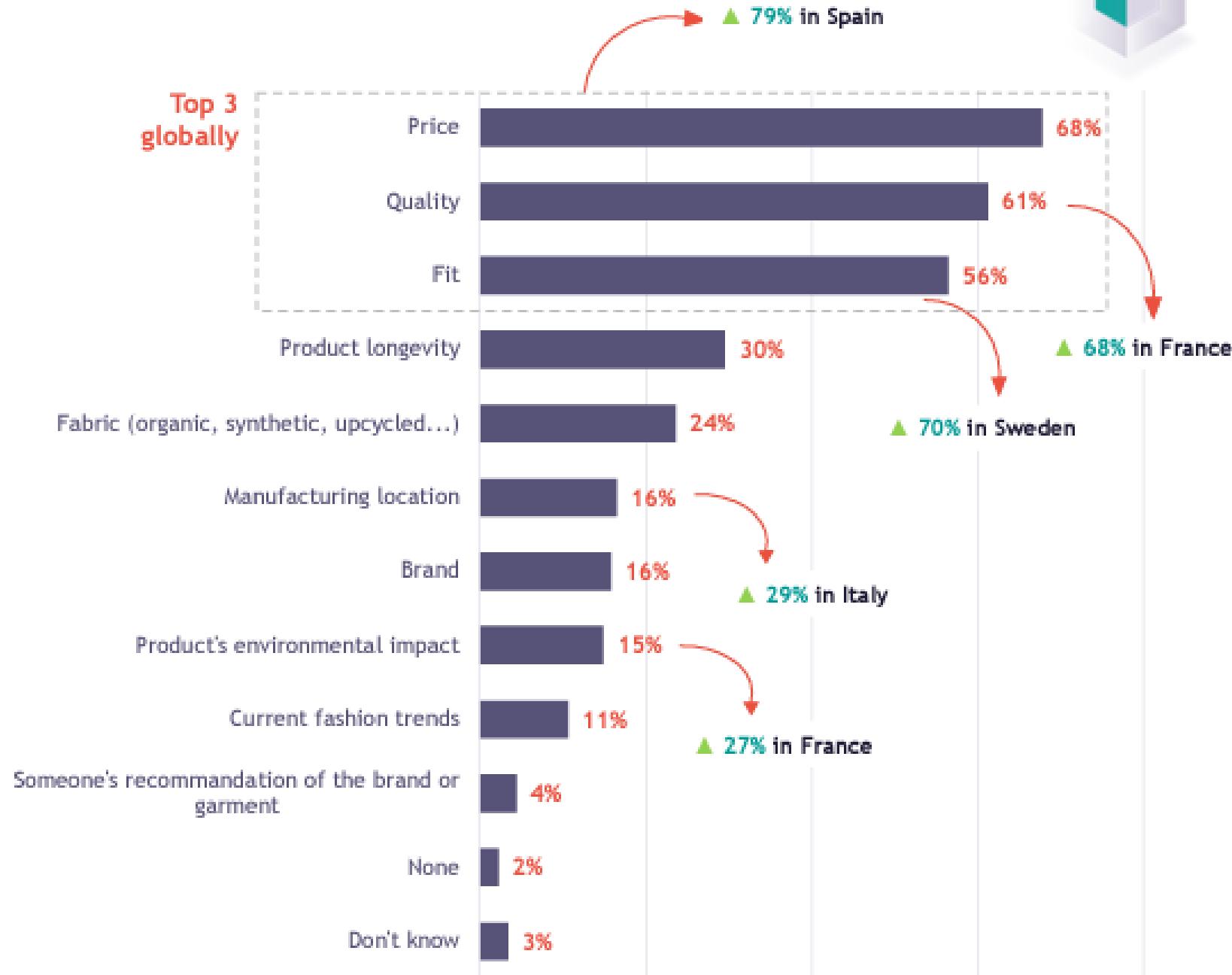
## INTEREST IN FASHION

■ Very Interested ■ Rather Interested ■ Not very interested ■ Not at all interested ■ No opinion



# YouGov European Fashion Report 2021

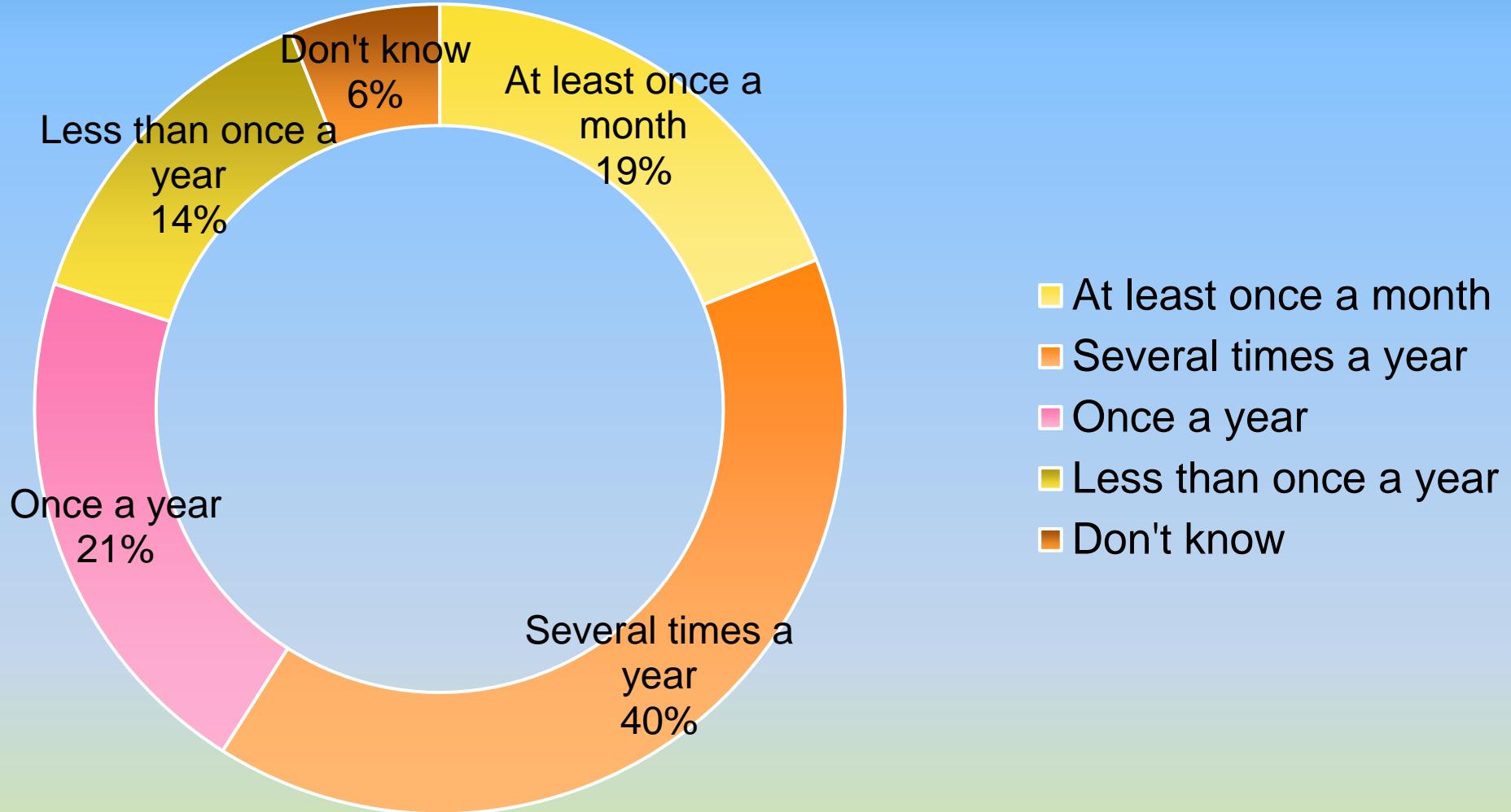
Criteria when buying clothes



# YouGov

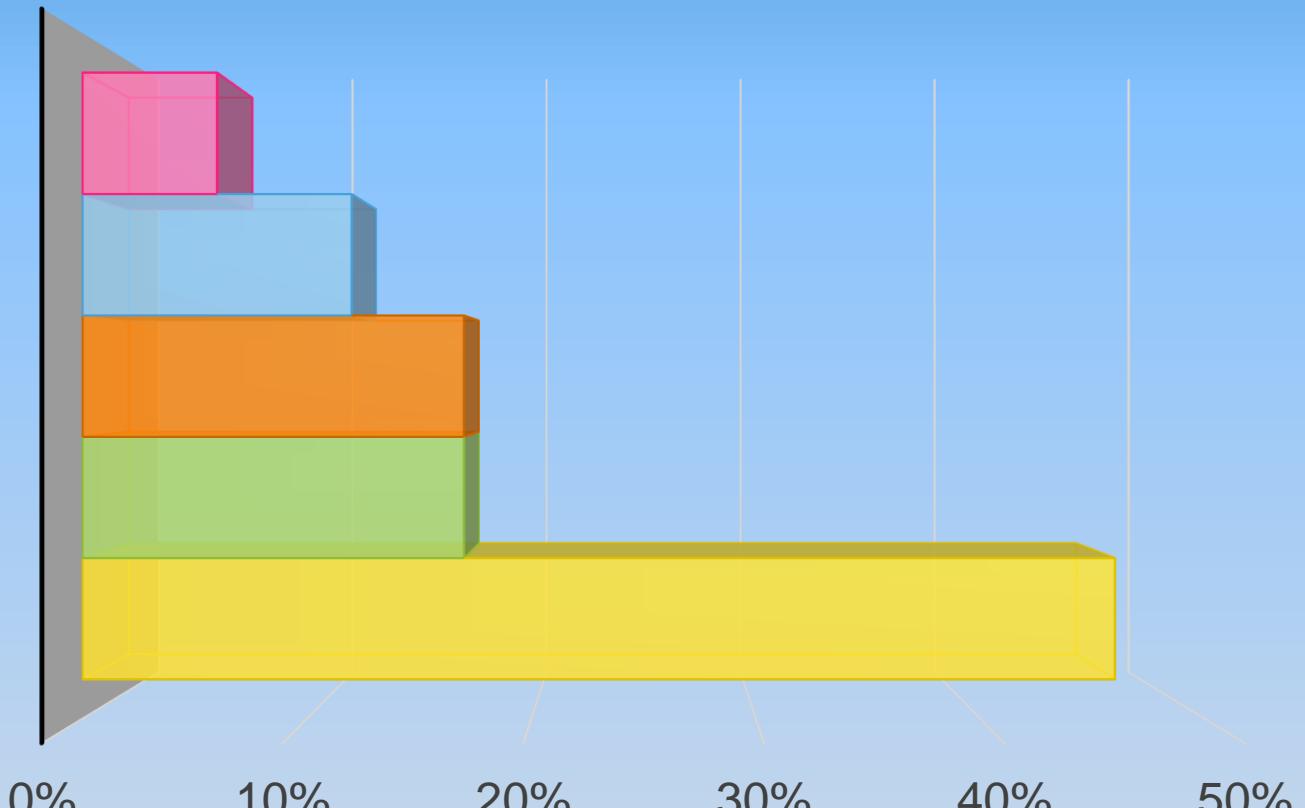
## European Fashion Report 2021

### Online selling frequency



# YouGov European Fashion Report 2021

WHERE DO PEOPLE  
PREFER BUYING CLOTHES?



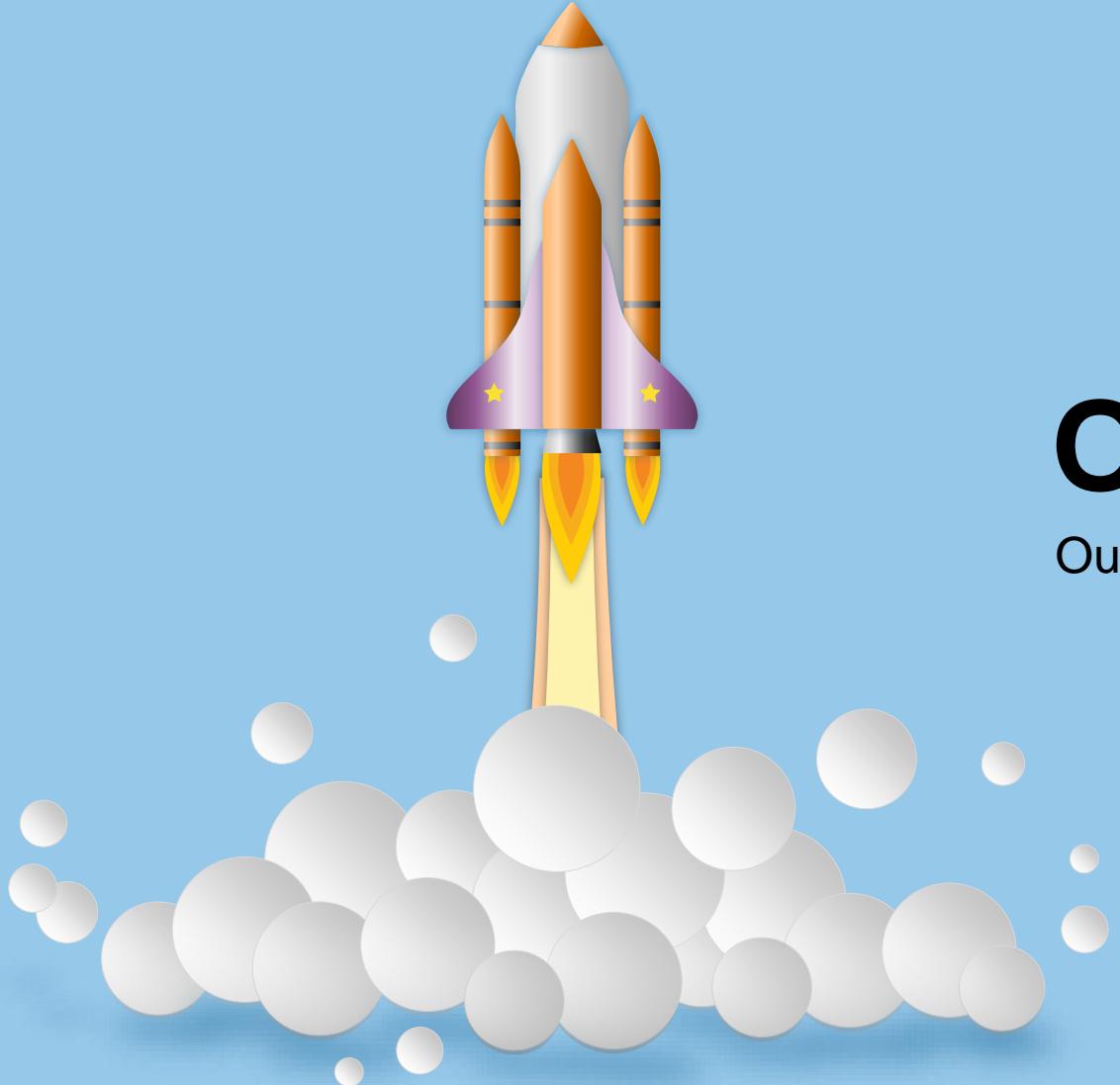
■ Luxury brands

■ Resale apps

■ Ethical brands

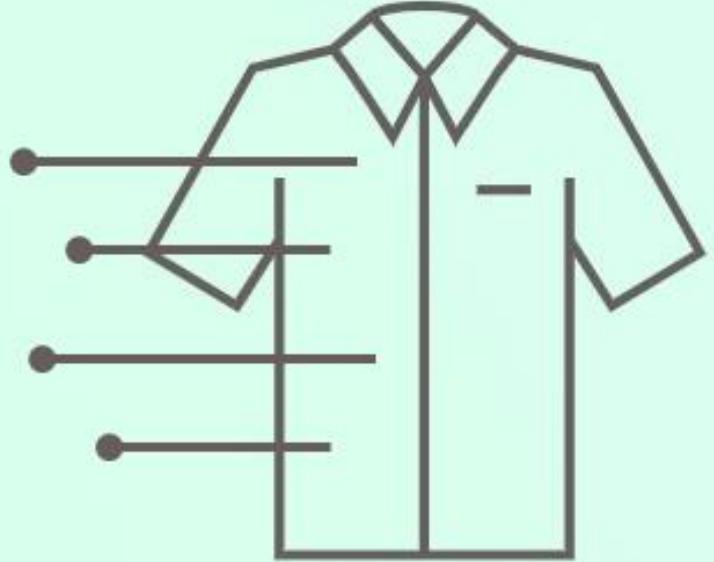
■ Second hand shops

■ Fast fashion stores



# Our Solution

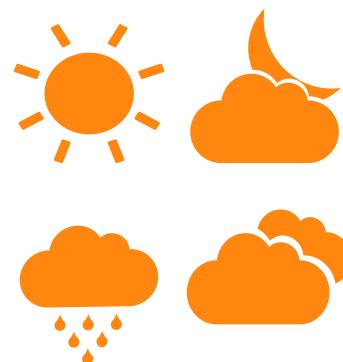
Our Vision & Goals



# dressmeup

EXPAND YOUR OUTFITS

## Our Solution



# How to access

## Mobile App

As an app, on  
Android and iOS  
devices.



## Webpage

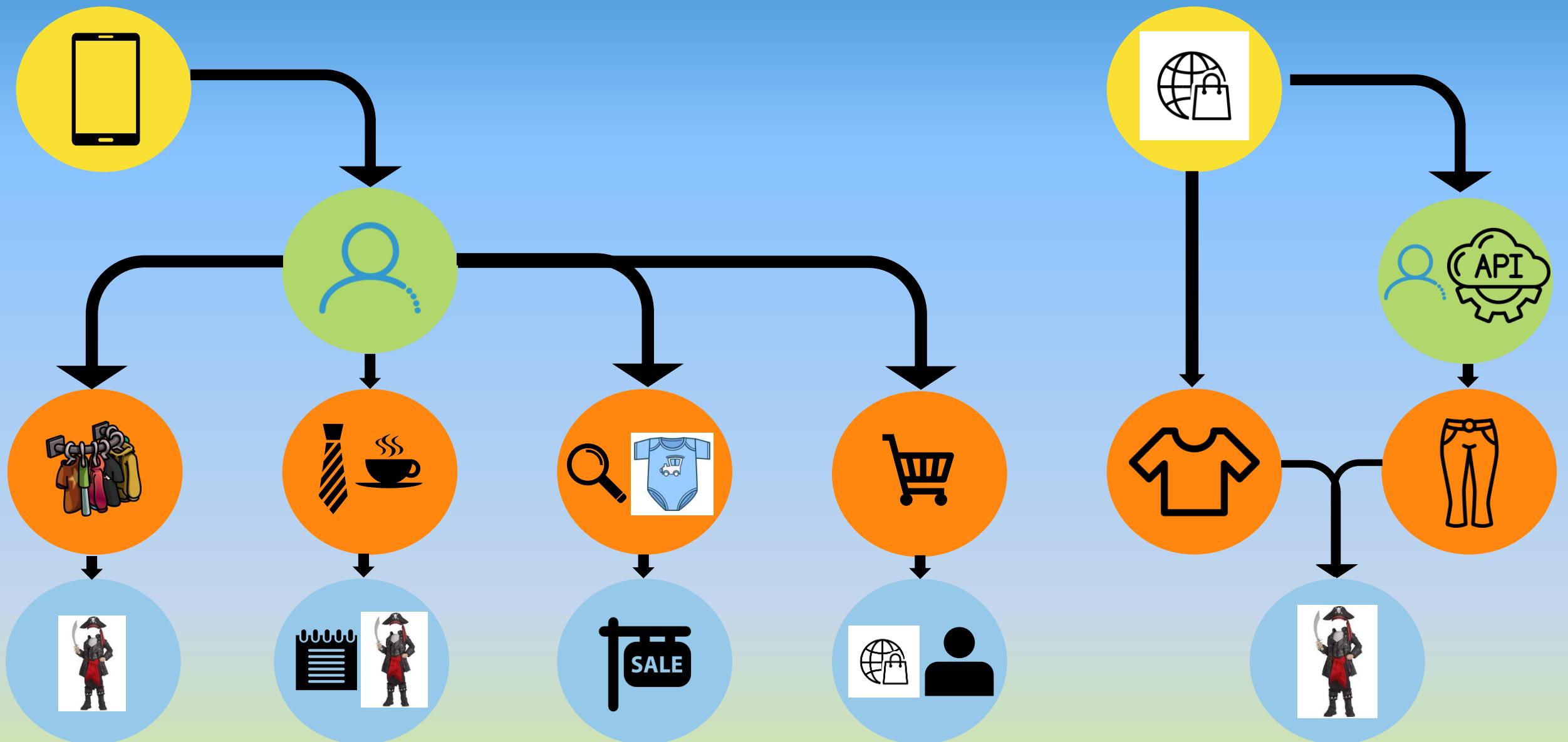
As a webpage, on a  
browser using a PC, tablet,  
mobile or whatever else.

## Partnered e-shops

As an API, through  
e-shops' webpages

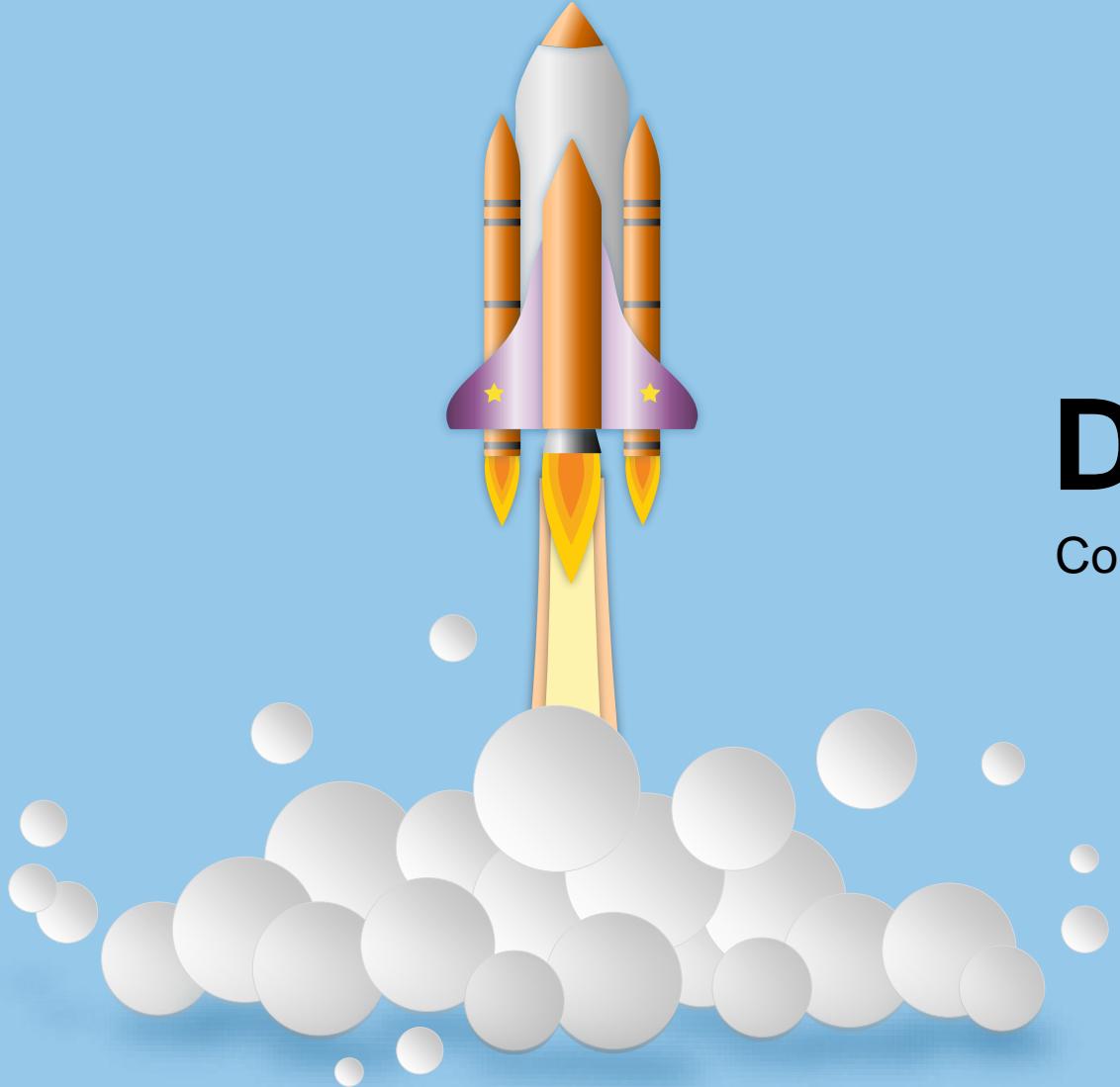


# How it will work



# Competition Analysis

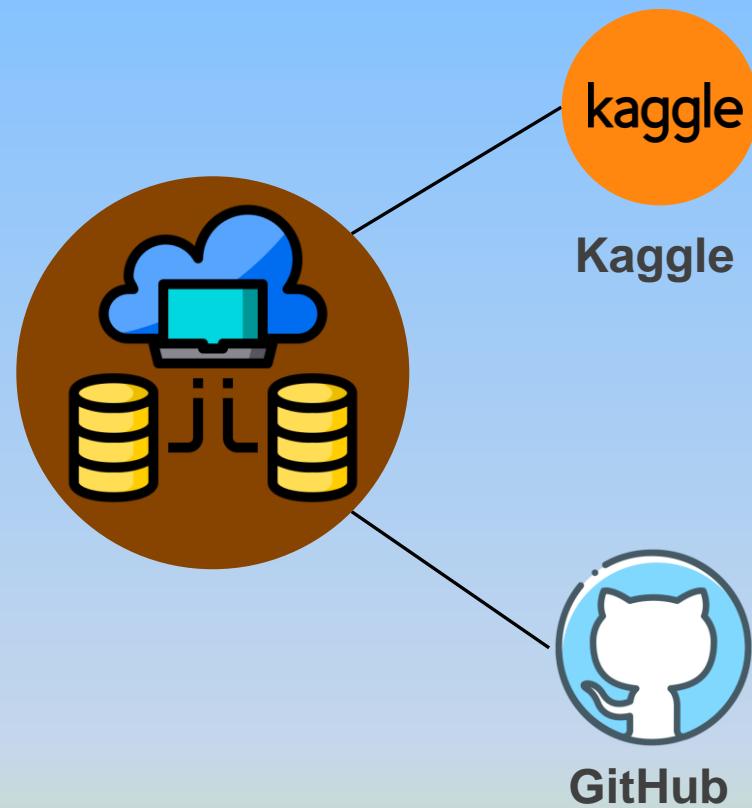
Functionality	DressMeUp	Acloset	Whering	OpenWardrobe
Add clothes	✓	✓	✓	✓
Make outfits	✓	✓	✓	✓
Plan outfits	✓	✓	✓	✓
Sell clothes	✓	✓		
Buy clothes	✓	✓	✓	
Track clothes usage	✓			
AI uses weather forecast	✓		✓	
AI uses occasion formality & time of day	✓			
E-shops embedded API	✓			



# Data

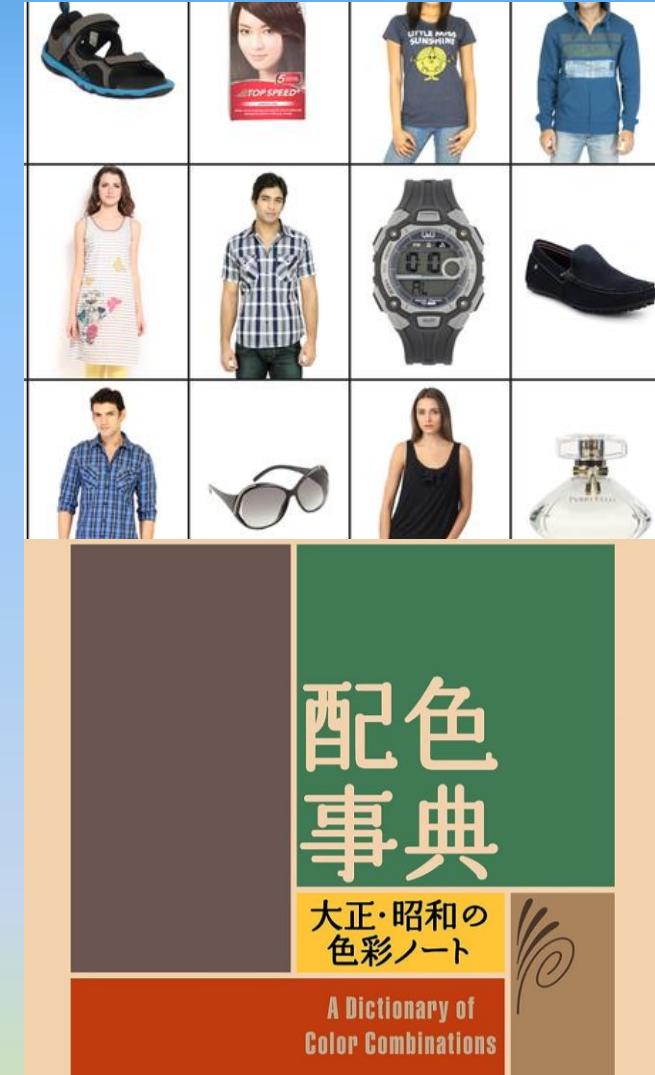
Collection, Overview & Processing

# Data Collection



Fashion Product Images Dataset, containing 44k+ products with multiple category labels, descriptions and high-resolution images. It is our primary dataset, from which most of our data came from.  
Size: 25 GB

Digital Version of Sanzo Wada's 'A Dictionary of Color Combinations' book, containing 300+ combinations from 150+ unique colors.  
Size: 23 MB



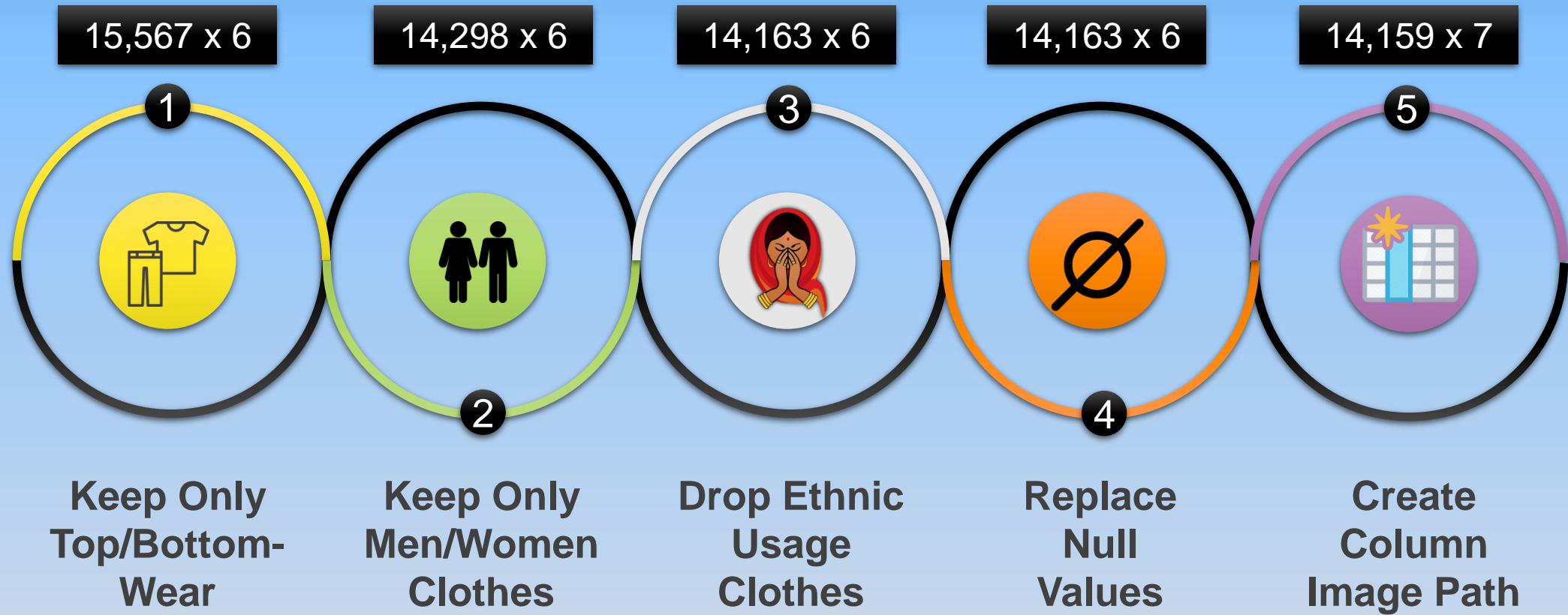
A	B	C	D	E	F	G	H	I	J	
1	id	gender	masterCategory	subCategory	articleType	baseColour	season	year	usage	productDisplayName
2	15970	Men	Apparel	Topwear	Shirts	Navy Blue	Fall	2011	Casual	Turtle Check Men Navy Blue Shirt
3	39386	Men	Apparel	Bottomwear	Jeans	Blue	Summer	2012	Casual	Peter England Men Party Blue Jeans
4	59263	Women	Accessories	Watches	Watches	Silver	Winter	2016	Casual	Titan Women Silver Watch
5	21379	Men	Apparel	Bottomwear	Track Pants	Black	Fall	2011	Casual	Manchester United Men Solid Black Track Pants
6	53759	Men	Apparel	Topwear	Tshirts	Grey	Summer	2012	Casual	Puma Men Grey T-shirt
7	1855	Men	Apparel	Topwear	Tshirts	Grey	Summer	2011	Casual	Inkfruit Mens Chain Reaction T-shirt
8	30805	Men	Apparel	Topwear	Shirts	Green	Summer	2012	Ethnic	Fabindia Men Striped Green Shirt
9	26960	Women	Apparel	Topwear	Shirts	Purple	Summer	2012	Casual	Jealous 21 Women Purple Shirt
10	29114	Men	Accessories	Socks	Socks	Navy Blue	Summer	2012	Casual	Puma Men Pack of 3 Socks
11	30039	Men	Accessories	Watches	Watches	Black	Winter	2016	Casual	Skagen Men Black Watch
12	9204	Men	Footwear	Shoes	Casual Shoes	Black	Summer	2011	Casual	Puma Men Future Cat Remix SF Black Casual Shoes
13	48123	Women	Accessories	Belts	Belts	Black	Summer	2012	Casual	Fossil Women Black Huarache Weave Belt
14	18653	Men	Footwear	Flip Flops	Flip Flops	Black	Fall	2011	Casual	Fila Men Cush Flex Black Slippers
15	47957	Women	Accessories	Bags	Handbags	Blue	Summer	2012	Casual	Murcia Women Blue Handbag
16	46885	Boys	Footwear	Flip Flops	Flip Flops	Navy Blue	Fall	2012	Casual	Ben 10 Boys Navy Blue Slippers
17	12369	Men	Apparel	Topwear	Shirts	Purple	Fall	2011	Formal	Reid & Taylor Men Check Purple Shirts
18	29928	Men	Accessories	Watches	Watches	Black	Winter	2016	Casual	Police Men Black Dial Watch PL12889JVS8
19	42419	Girls	Apparel	Topwear	Tops	White	Summer	2012	Casual	Gini and Jony Girls Knit White Top
20	51832	Women	Apparel	Innerwear	Bra	Beige	Summer	2016	Casual	Bwitch Beige Full-Coverage Bra BW335
21	47359	Women	Accessories	Bags	Handbags	Brown	Summer	2012	Casual	Baggit Women Brown Handbag
22	17429	Men	Accessories	Watches	Watches	Black	Winter	2016	Casual	CASIO G-Shock Men Black Digital Watch G-7710-1DR G
23	12967	Men	Footwear	Sandal	Sandals	Black	Fall	2011	Casual	ADIDAS Men Spry M Black Sandals
24	6842	Unisex	Accessories	Shoe Accessories	Shoe Accessories	Black	Summer	2011	Casual	Timberland Unisex Rubber Sole Brush Shoe Accessori
25	13089	Men	Apparel	Topwear	Sweatshirts	Grey	Fall	2011	Sports	ADIDAS Men Lfc Auth Hood Grey Sweatshirts
26	18461	Men	Personal Care	Fragrance	Deodorant	White	Spring	2017	Casual	David Beckham Signature Men Deos
27	9036	Men	Footwear	Shoes	Formal Shoes	Black	Winter	2011	Formal	Buckaroo Men Flores Black Formal Shoes
28	48311	Women	Accessories	Jewellery	Bracelet	Bronze	Winter	2012	Casual	Pitaraa Women Bronze Beaded Bracelet
29	7990	Men	Apparel	Topwear	Tshirts	Navy Blue	Fall	2011	Sports	Fila Men's Round Neck Navy Blue T-shirt
30	56019	Women	Personal Care	Lips	Lipstick	Brown	Spring	2017	Casual	Colorbar Soft Touch Show Stopper Copper Lipstick 037
31	21977	Women	Accessories	Bags	Handbags	Brown	Winter	2015	Casual	Murcia Women Casual Brown Handbag
32	37812	Men	Apparel	Topwear	Shirts	Navy Blue	Summer	2012	Formal	John Players Men Navy Blue Shirt
33	4729	Boys	Apparel	Topwear	Tshirts	Grey	Summer	2011	Casual	Disney Kids Boy's Crew Sea Life Sialing Green Teen Kid

44,446 x 10

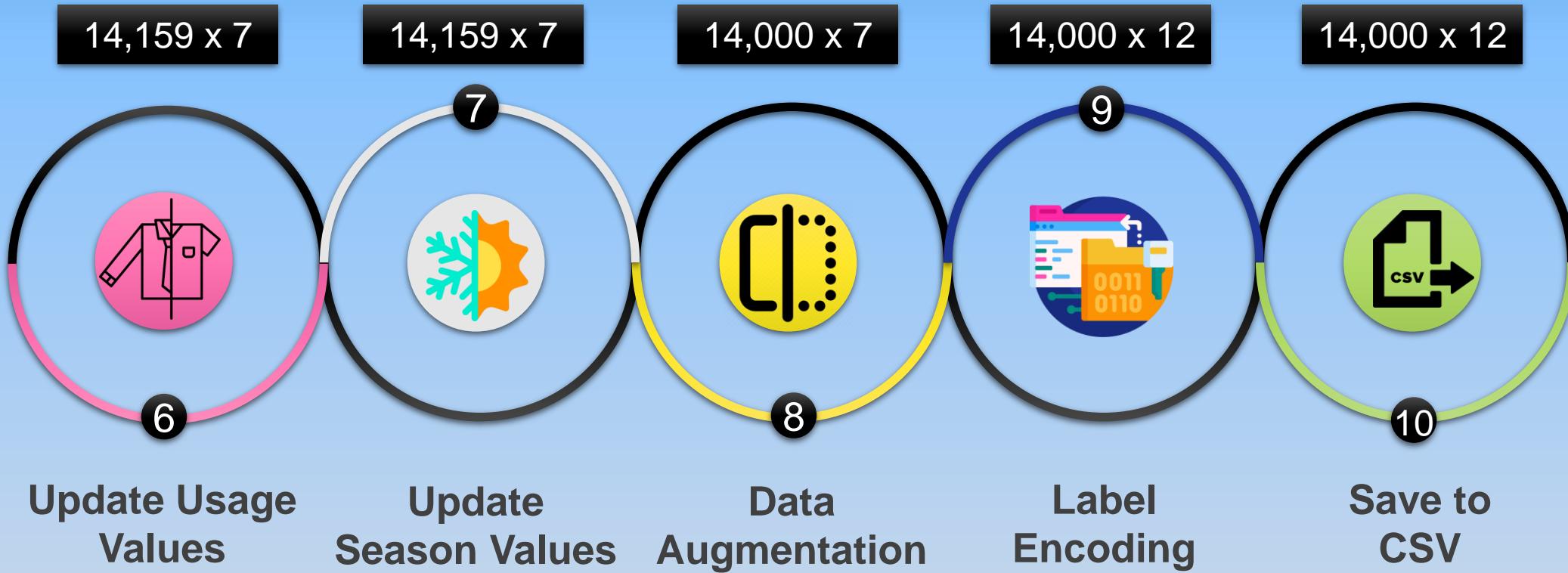
A	B	C	D	E	F	G	H	I	J
id	gender	masterCategory	subCategory	articleType	baseColour	season	year	usage	productDisplayName
15970	Men	Apparel	Topwear	Shirts	Navy Blue	Fall	201	Casual	Turtle Check Men Navy Blue Shirt
39386	Men	Apparel	Bottomwear	Jeans	Blue	Summer	201	Casual	Peter England Men Party Blue Jeans
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21379	Men	Apparel	Bottomwear	Track Pants	Black	Fall	201	Casual	Manchester United Men Solid Black Track Pants
53759	Men	Apparel	Topwear	Tshirts	Grey	Summer	201	Casual	Puma Men Grey T-shirt
1855	Men	Apparel	Topwear	Tshirts	Grey	Summer	201	Casual	Inkfruit Mens Chain Reaction T-shirt
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18653	Men	Footwear	Flip Flops	Flip Flops	Black	Fall	201	Casual	Fila Men Cush Flex Black Slippers
47957	Women	Accessories	Bags	Handbags	Blue	Summer	201	Casual	Murcia Women Blue Handbag
46885	Boys	Footwear	Flip Flops	Flip Flops	Navy Blue	Fall	201	Casual	Ben 10 Boys Navy Blue Slippers
12369	Men	Apparel	Topwear	Shirts	Purple	Fall	201	Formal	Reid & Taylor Men Check Purple Shirts
29928	Men	Accessories	Watches	Watches	Black	Winter	201	Casual	Police Men Black Dial Watch PL12889JVS
42419	Girls	Apparel	Topwear	Tops	White	Summer	201	Casual	Gini and Jony Girls Knit White Top
51832	Women	Apparel	Innerwear	Bra	Beige	Summer	201	Casual	Bwitch Beige Full-Coverage Bra BW335
47359	Women	Accessories	Bags	Handbags	Brown	Summer	201	Casual	Baggit Women Brown Handbag
17429	Men	Accessories	Watches	Watches	Black	Winter	201	Casual	CASIO G-Shock Men Black Digital Watch G-7710-1DR G
12967	Men	Footwear	Sandal	Sandals	Black	Fall	201	Casual	ADIDAS Men Spry M Black Sandals
6842	Unisex	Accessories	Shoe Accessories	Shoe Accessories	Black	Summer	201	Casual	Timberland Unisex Rubber Sole Brush Shoe Accessori
13089	Men	Apparel	Topwear	Sweatshirts	Grey	Fall	201	Sports	ADIDAS Men Lfc Auth Hood Grey Sweatshirts
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9036	Men	Footwear	Shoes	Formal Shoes	Black	Winter	201	Formal	Buckaroo Men Flores Black Formal Shoes
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7990	Men	Apparel	Topwear	Tshirts	Navy Blue	Fall	201	Sports	Fila Men's Round Neck Navy Blue T-shirt
56019	Women	Personal Care	Lips	Lipstick	Brown	Spring	201	Casual	Colorbar Soft Touch Show Stopper Copper Lipstick 037
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37812	Men	Apparel	Topwear	Shirts	Navy Blue	Summer	201	Formal	John Players Men Navy Blue Shirt
4729	Boys	Apparel	Topwear	Tshirts	Black	Summer	201	Casual	Disney Kids Boy's Crew Sea Life Sialing Green Teen Kid

44,446 x 6

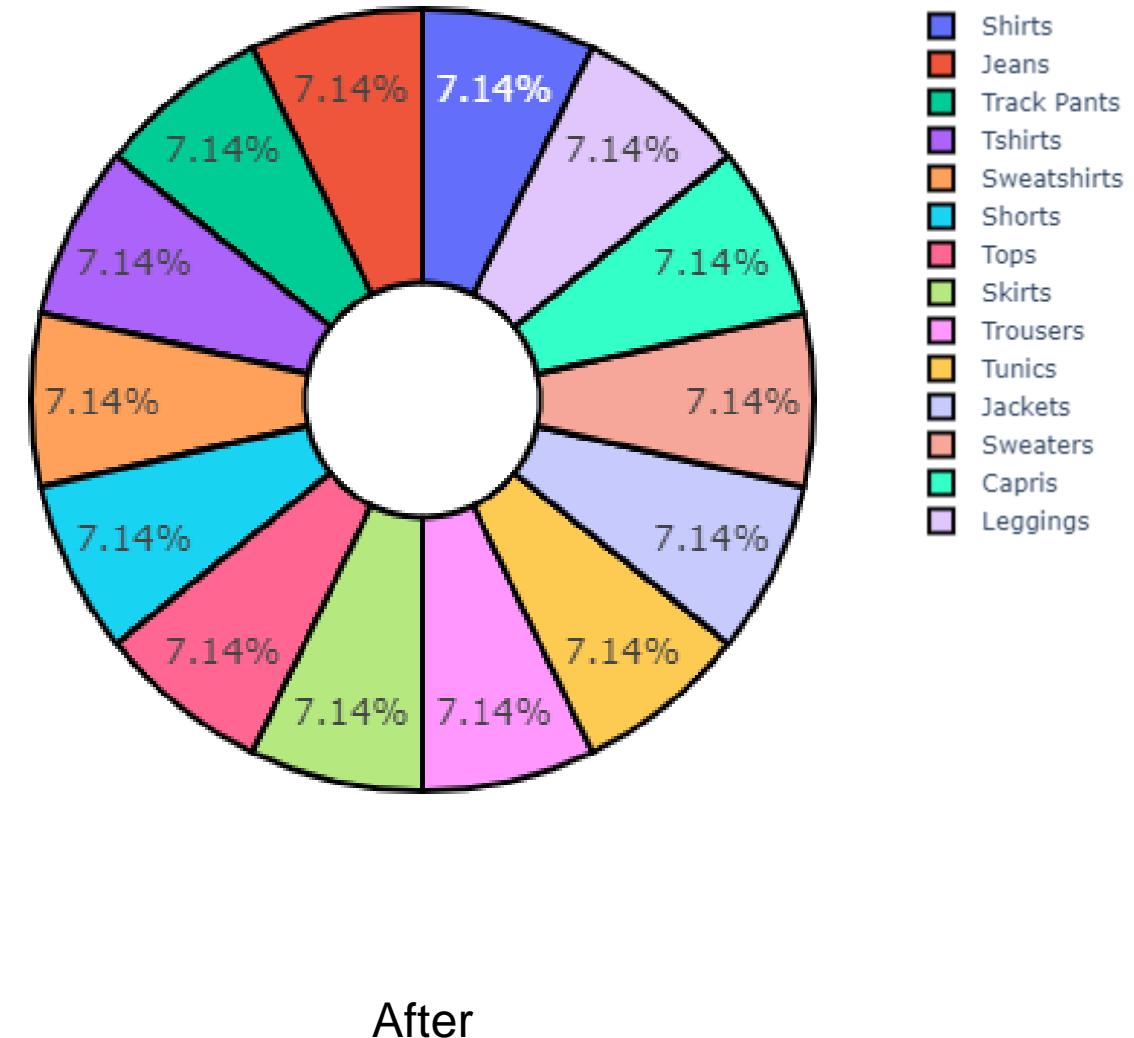
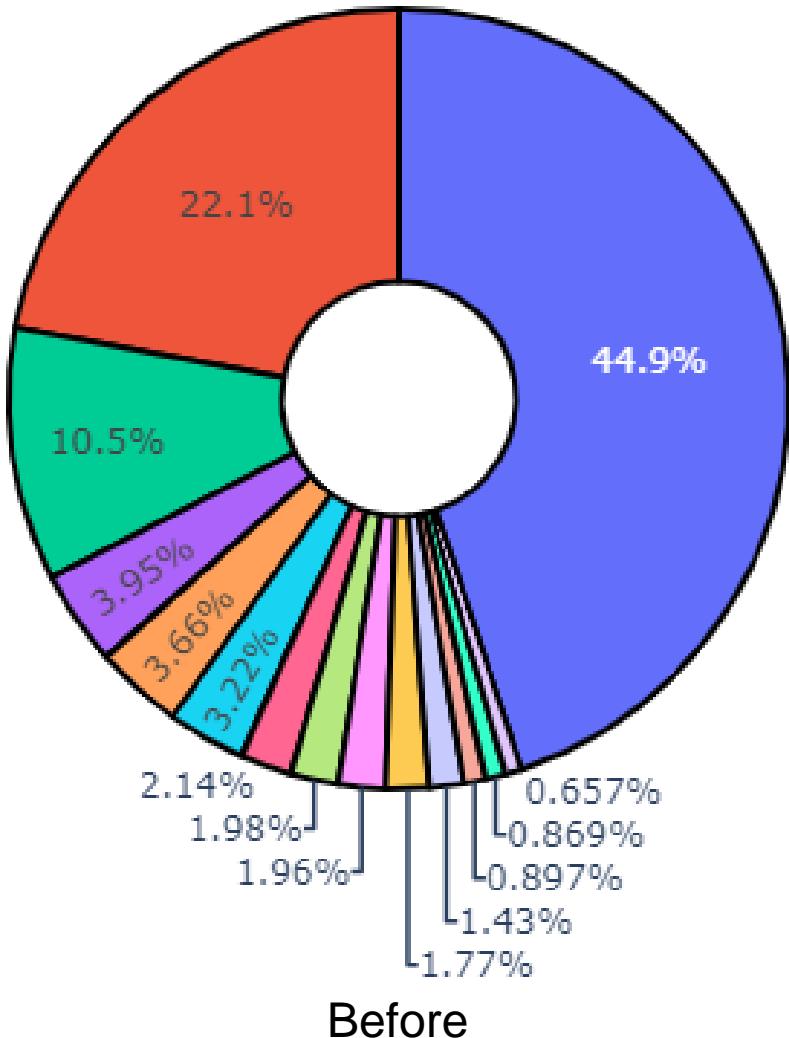
# Data Processing



# Data Processing (cont.)

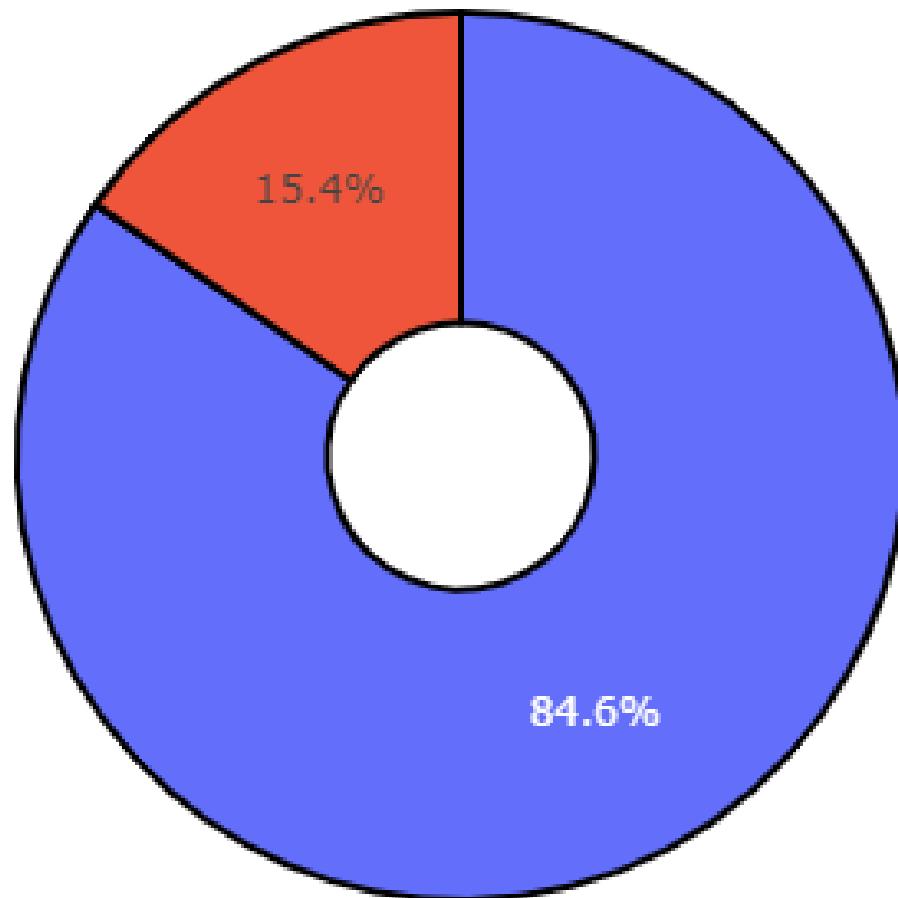


# ArticleType Distribution Augmentation

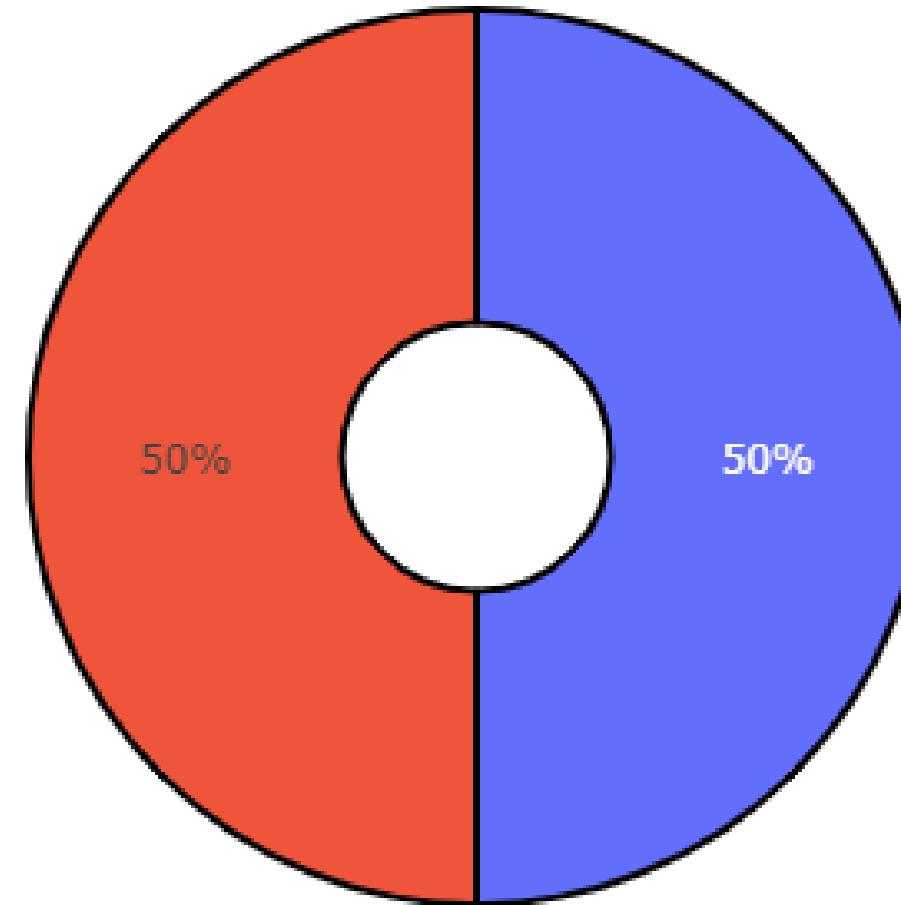


# SubCategory Distribution

## Augmentation



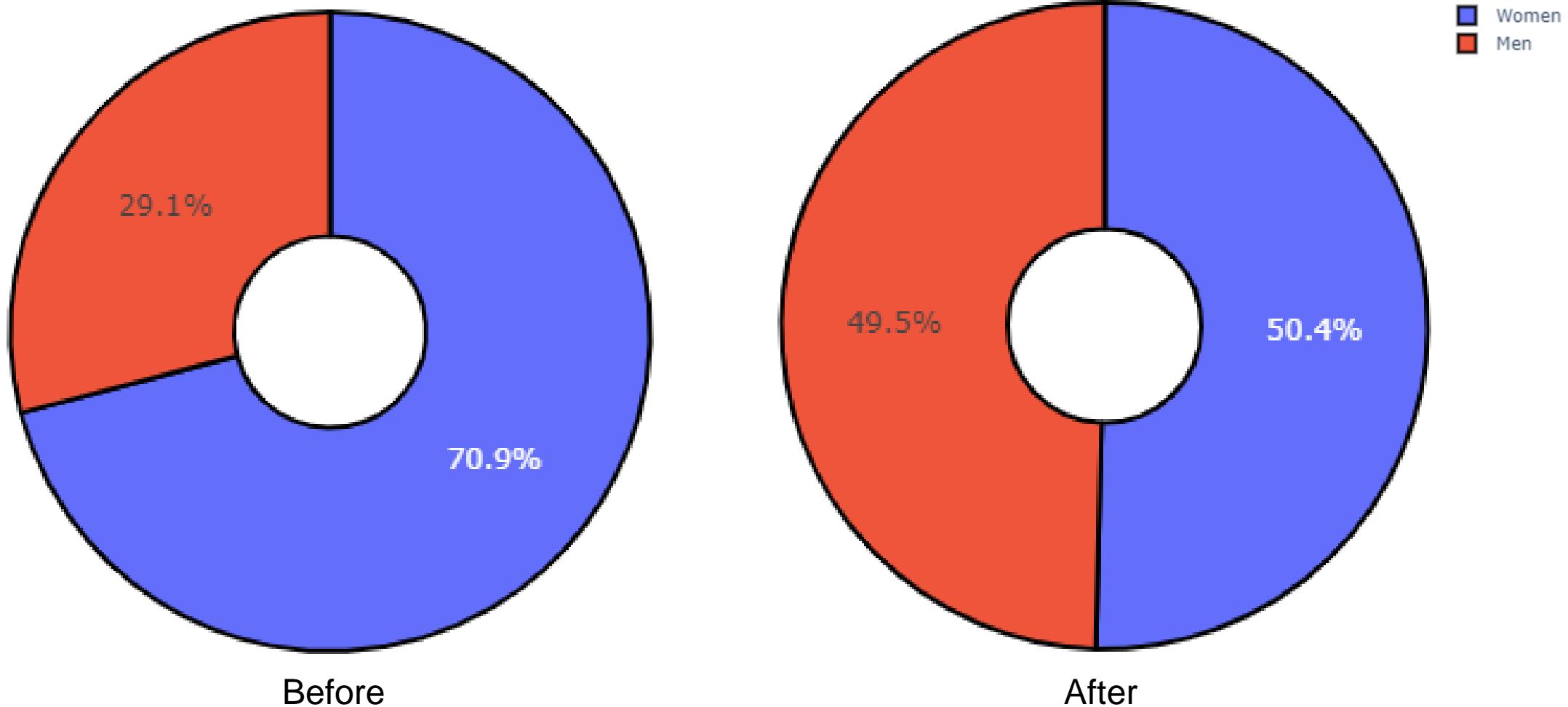
Before



After

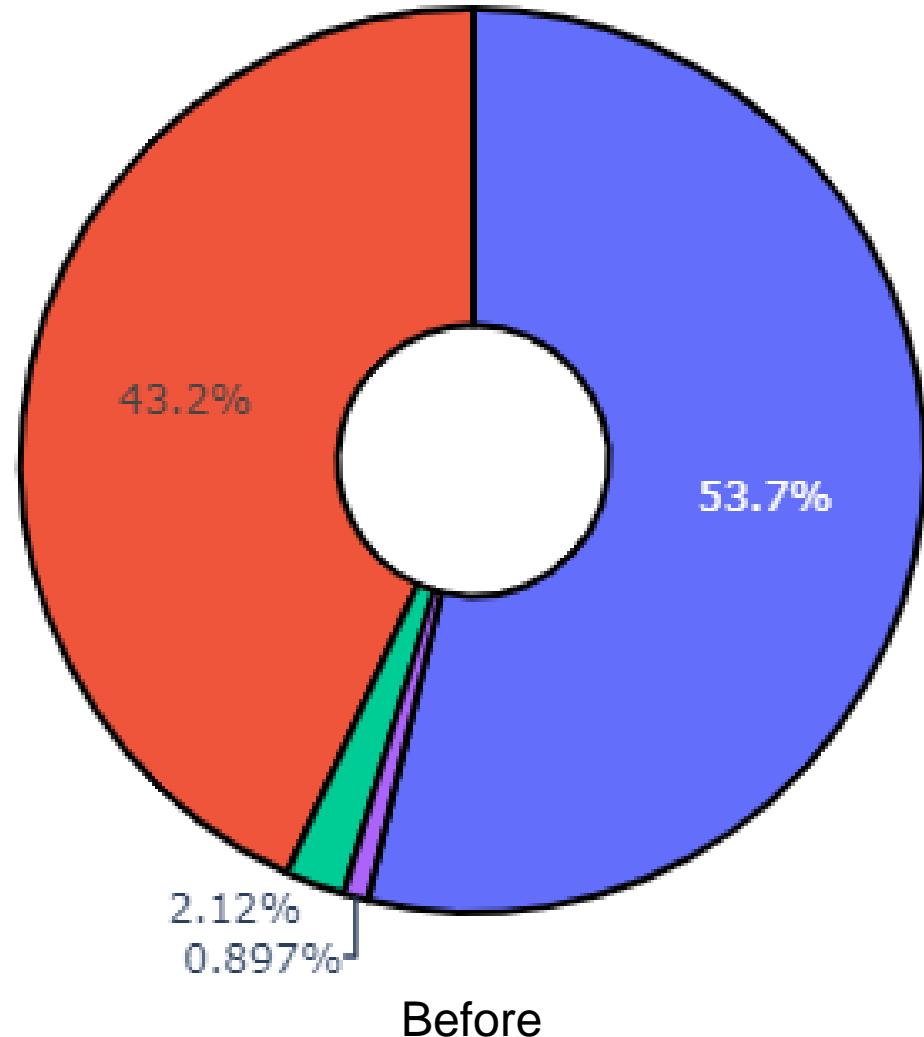
Topwear  
Bottomwear

# Gender Distribution Augmentation

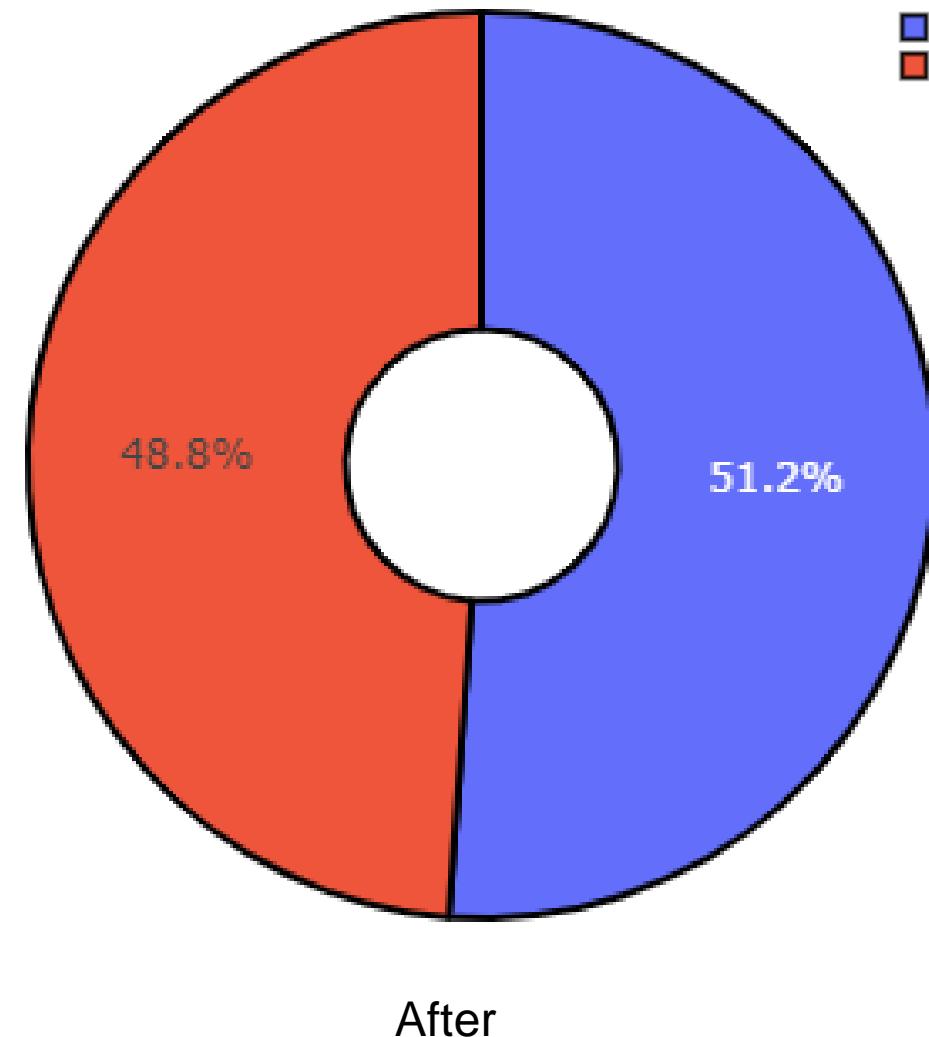


# Season Distribution Augmentation

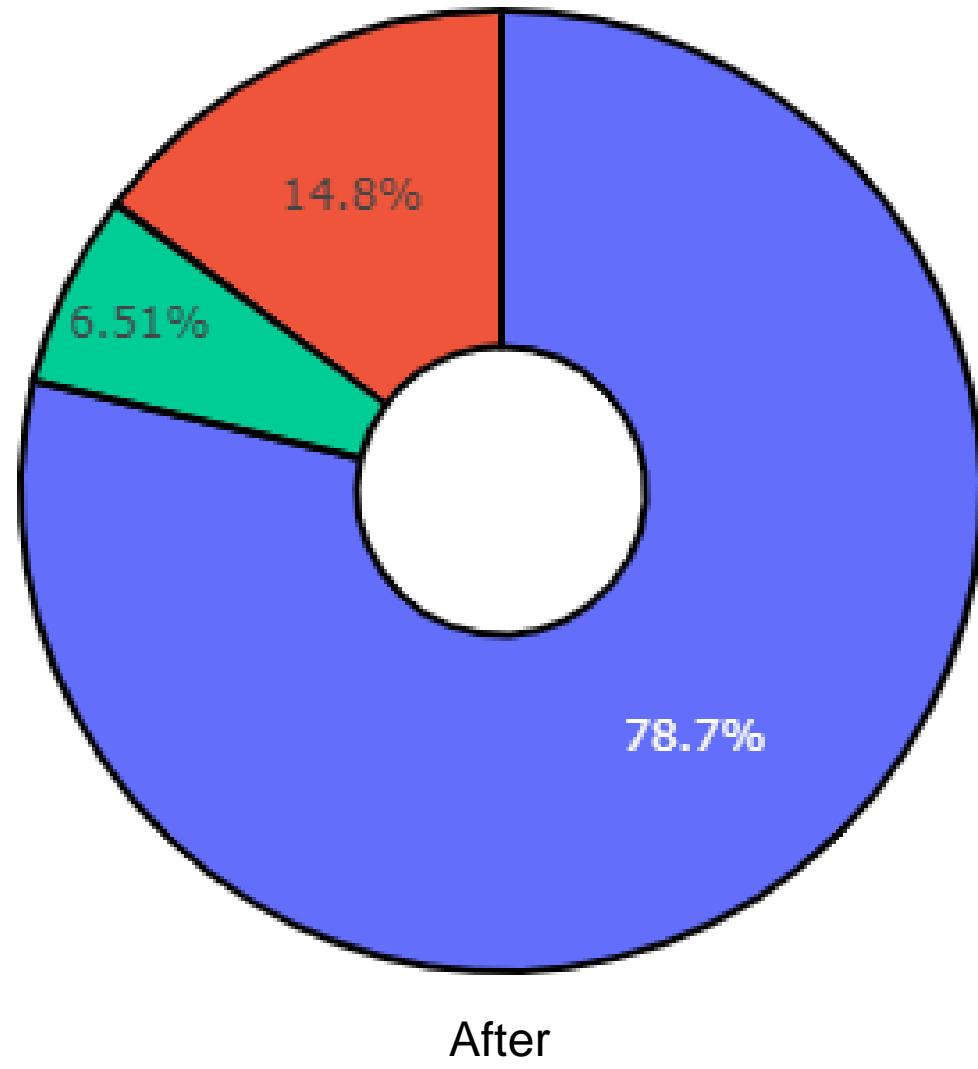
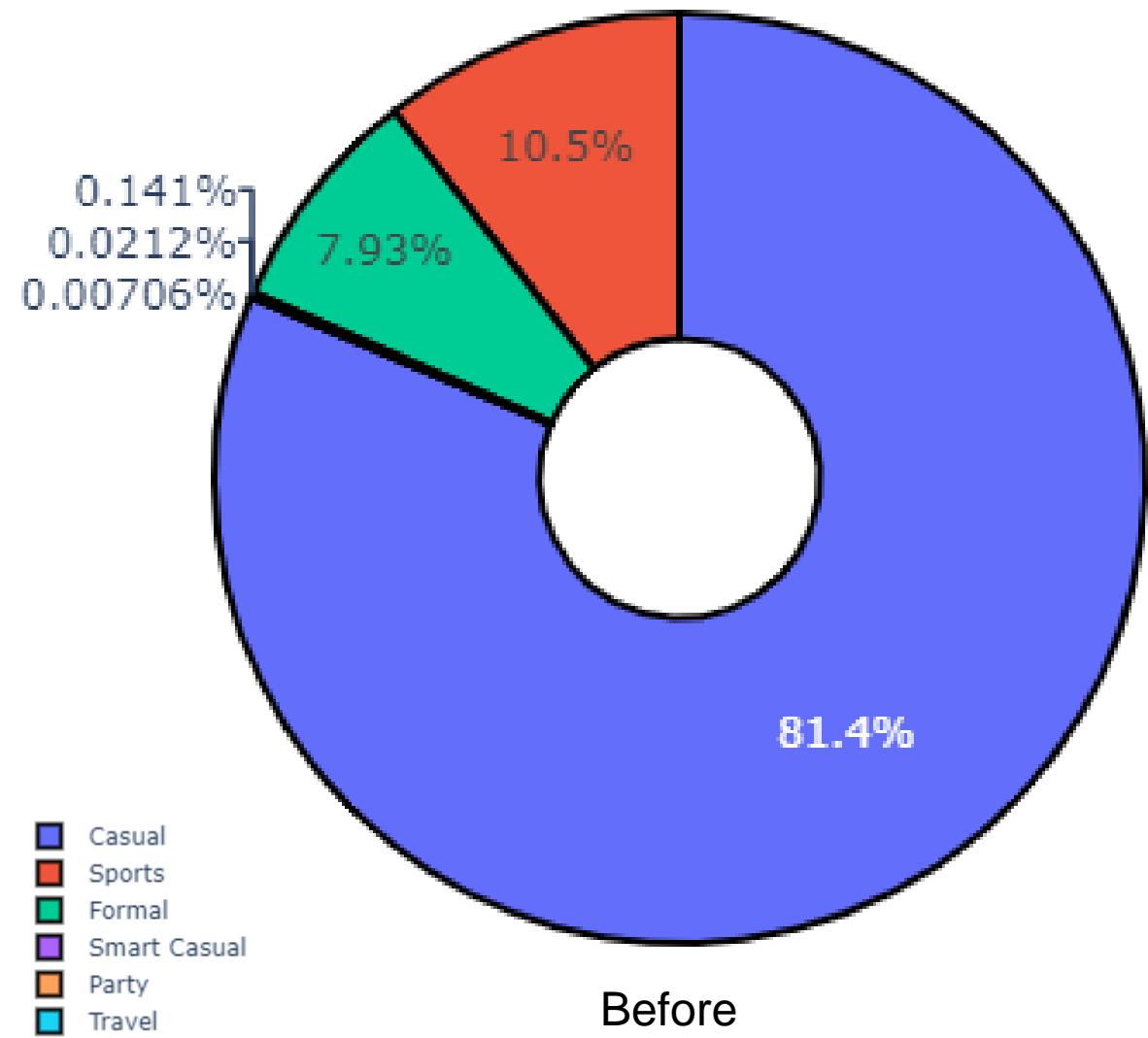
- Summer
- Fall
- Winter
- Spring

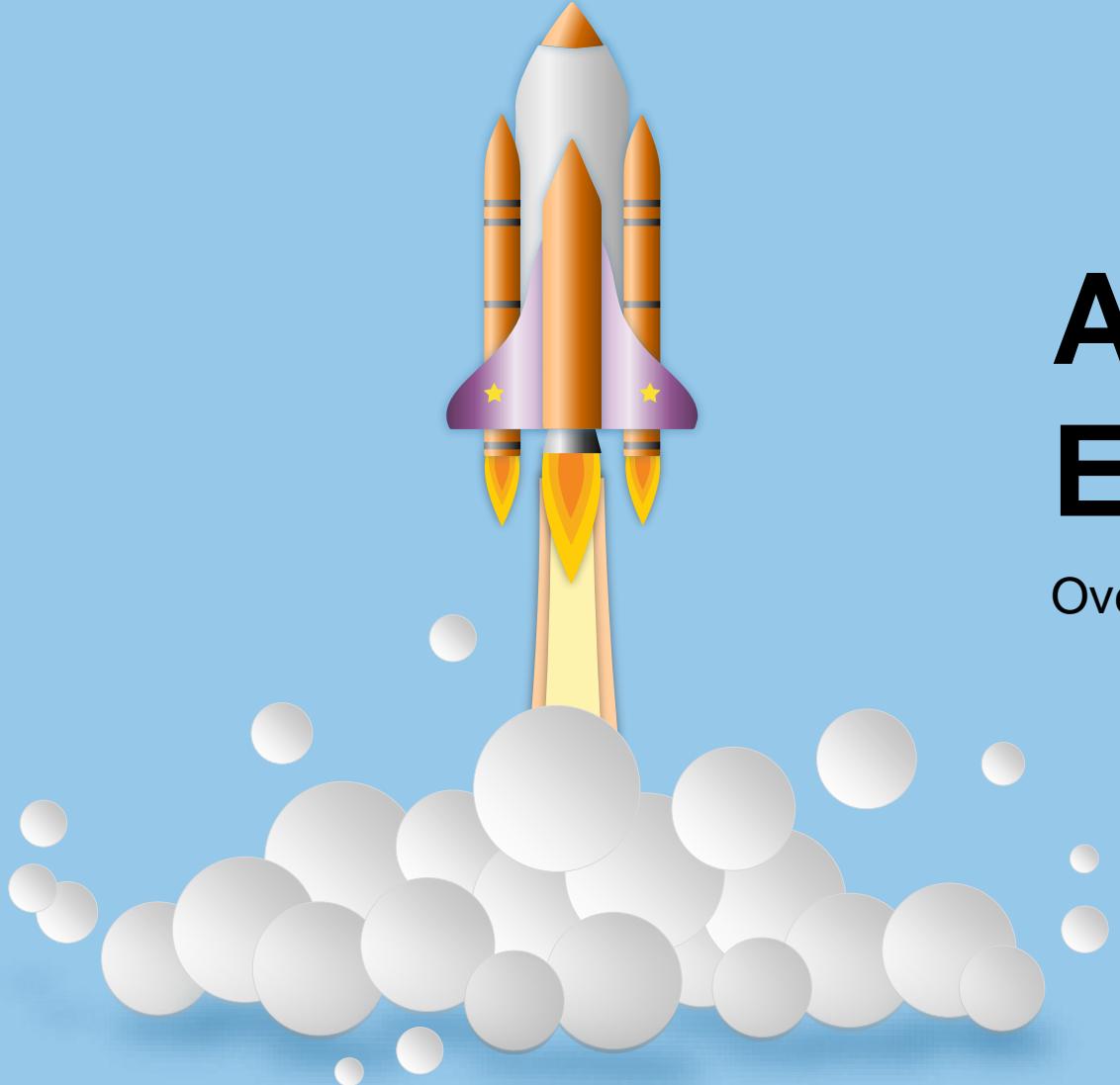


- Spring/Summer
- Fall/Winter



# Usage Distribution Augmentation





# Algorithms & Experiments

Overview, Setup & Configuration

# Algorithms Used



SGD Classifier

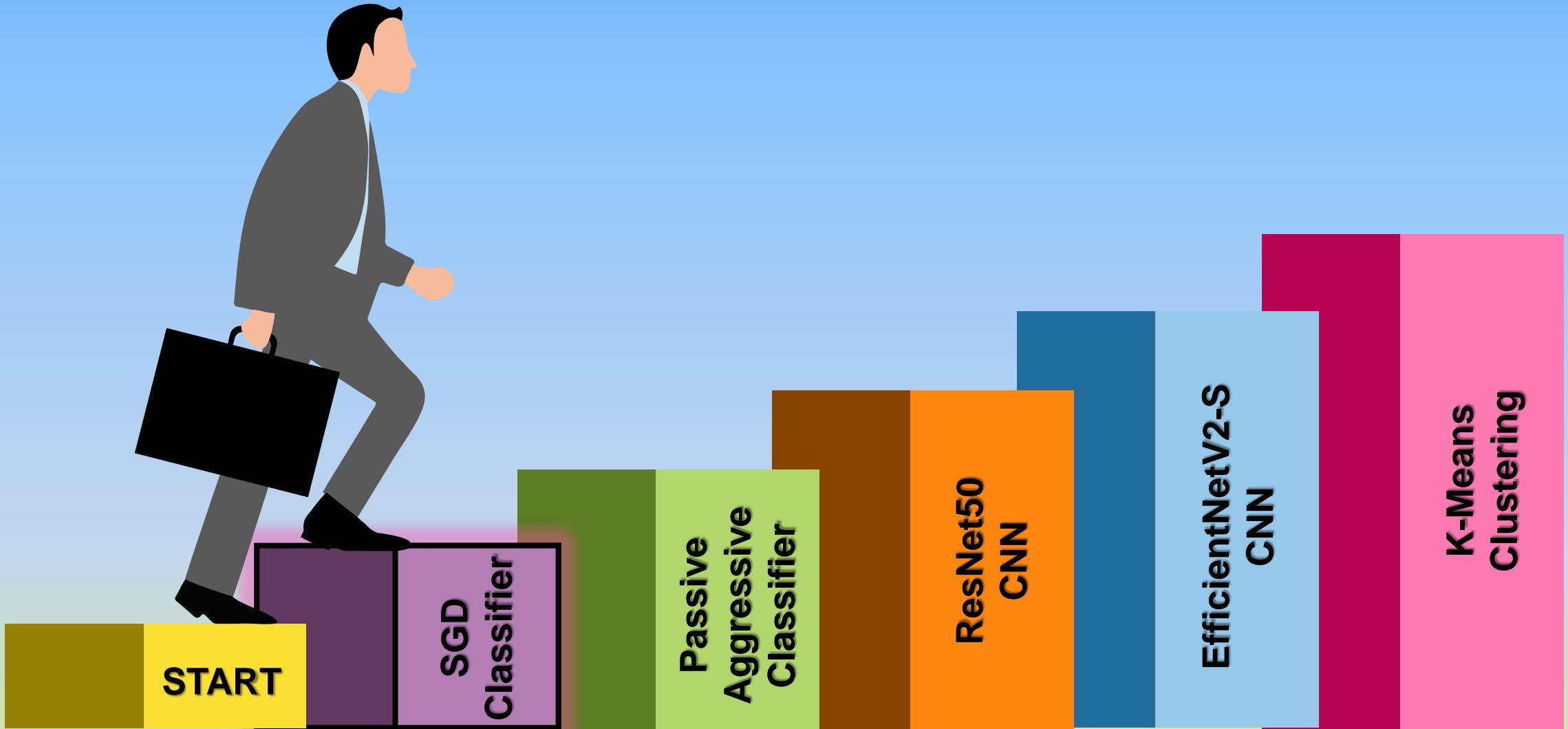
ResNet50 CNN

Passive Aggressive  
Classifier

EfficientNetV2-S  
CNN

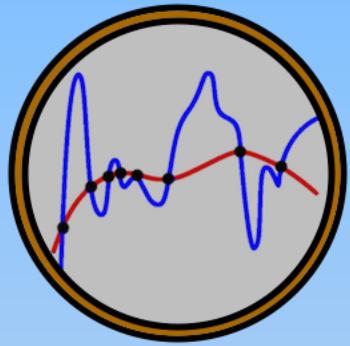
K-Means Clustering

# Algorithms

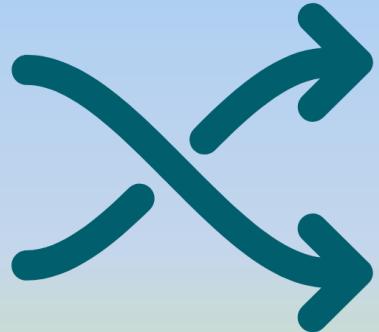


# SGD Classifier

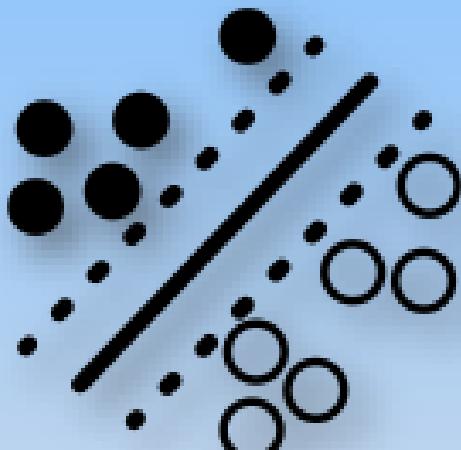
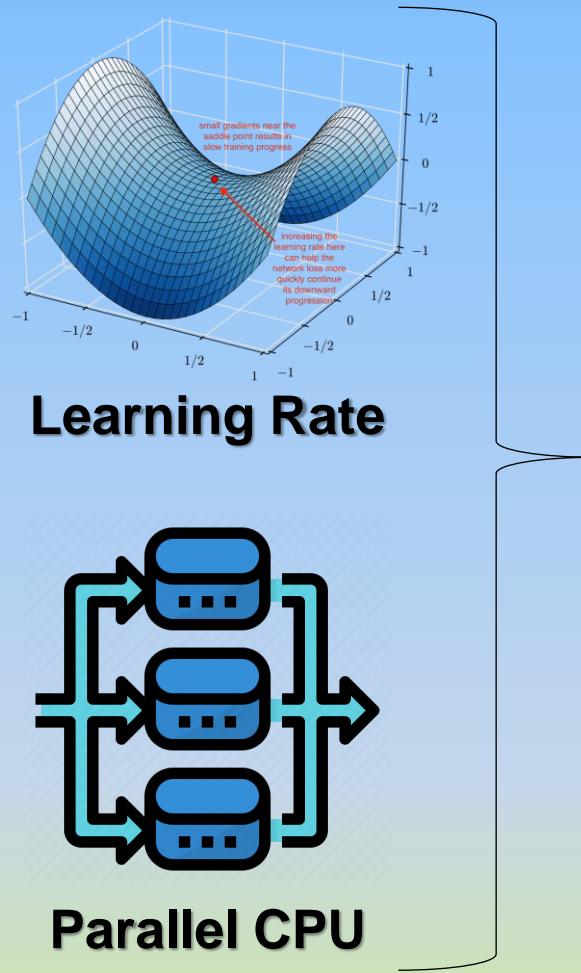
```
model = SGDClassifier(loss='hinge', penalty='l2', alpha=0.0001, l1_ratio=0.15, fit_intercept=True, tol=0.001, shuffle=True, verbose=2, epsilon=0.1,  
| | | | | n_jobs=-1, random_state=123, learning_rate='optimal', eta0=0.0, power_t=0.5, n_iter_no_change=5, class_weight=None, warm_start=False, average=False)  
multi_svc = MultiOutputClassifier(model, n_jobs=-1)
```



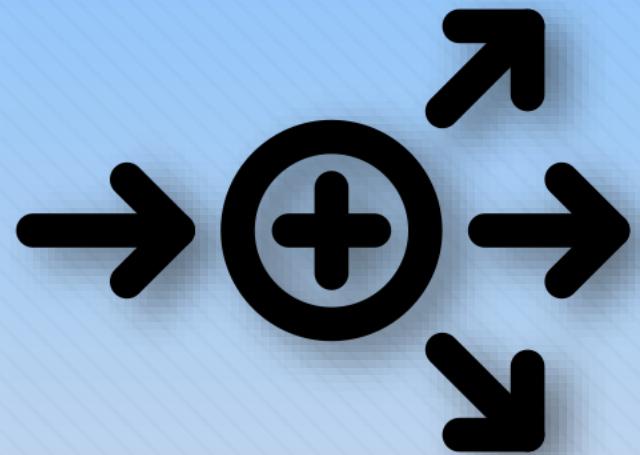
Regularization



Data Shuffling



Support Vector  
Machine



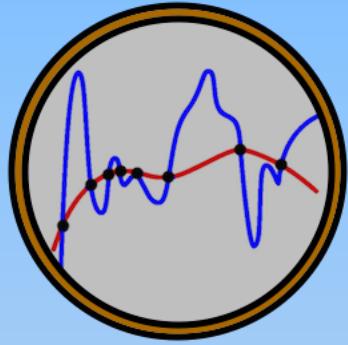
Multi-Output

# Algorithms

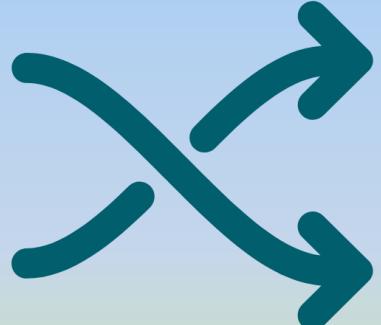


# Passive Aggressive Classifier

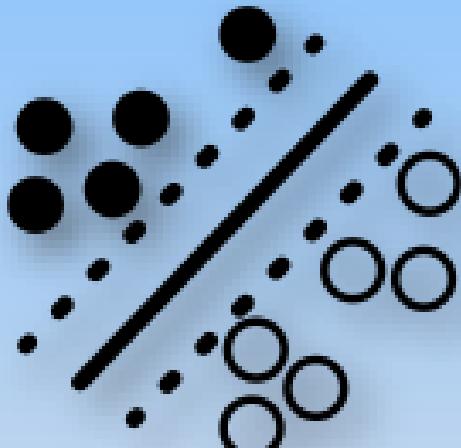
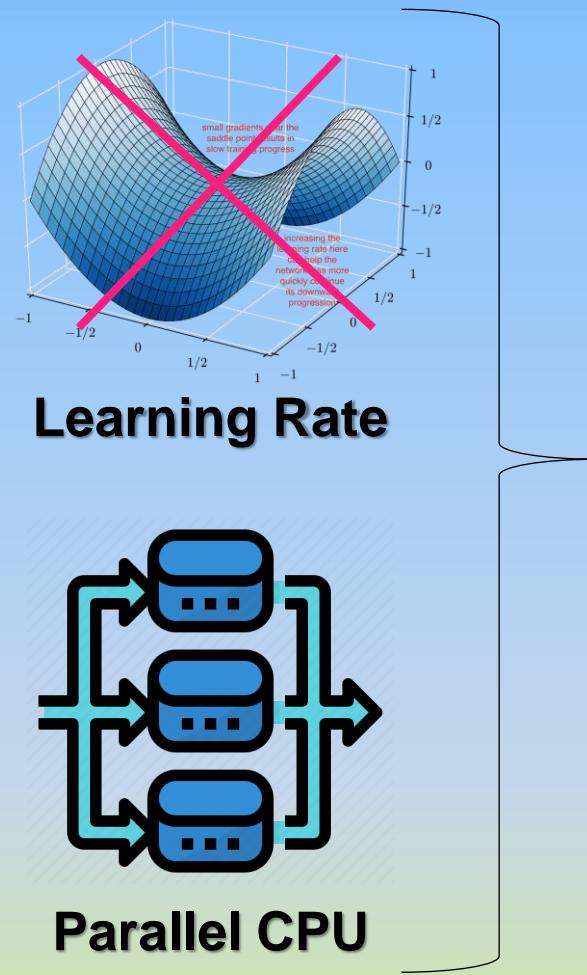
```
model = PassiveAggressiveClassifier(C=1.0, fit_intercept=True, shuffle=True, verbose=2, loss='hinge', n_jobs=-1, random_state=None, warm_start=False)
pass_aggr = MultiOutputClassifier(model, n_jobs=-1)
```



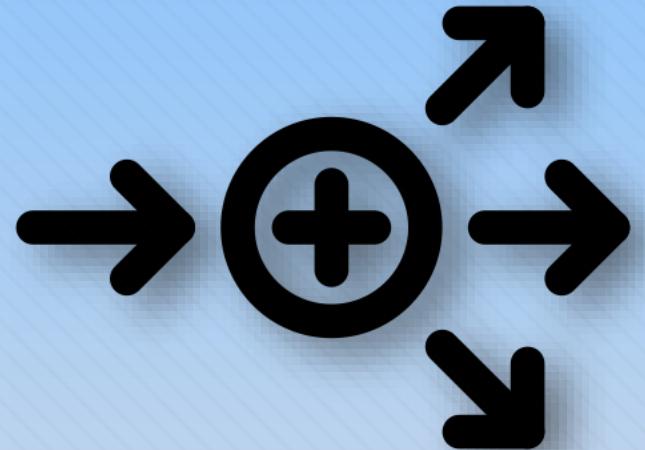
Regularization



Data Shuffling

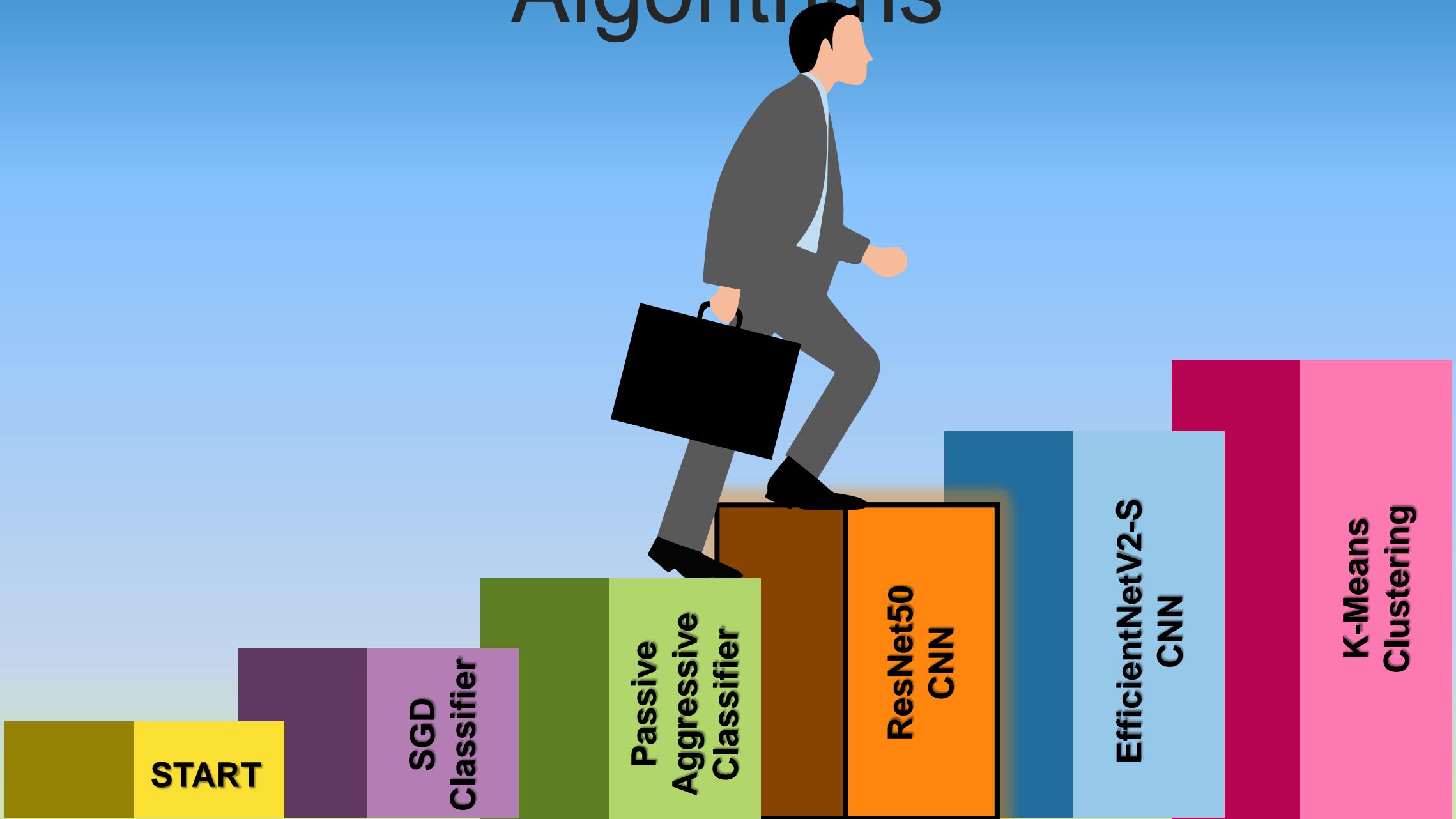


Support Vector  
Machine

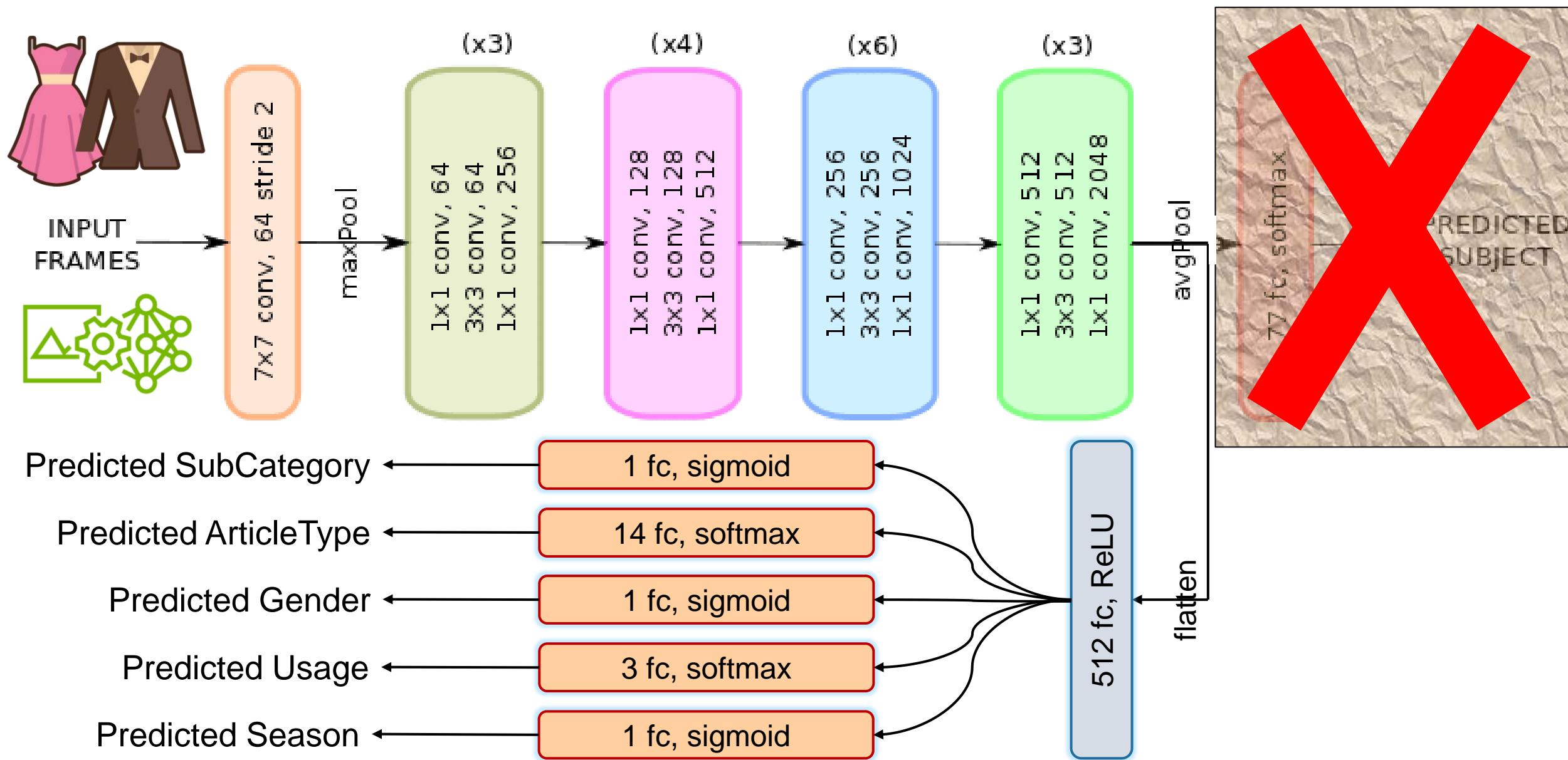


Multi-Output

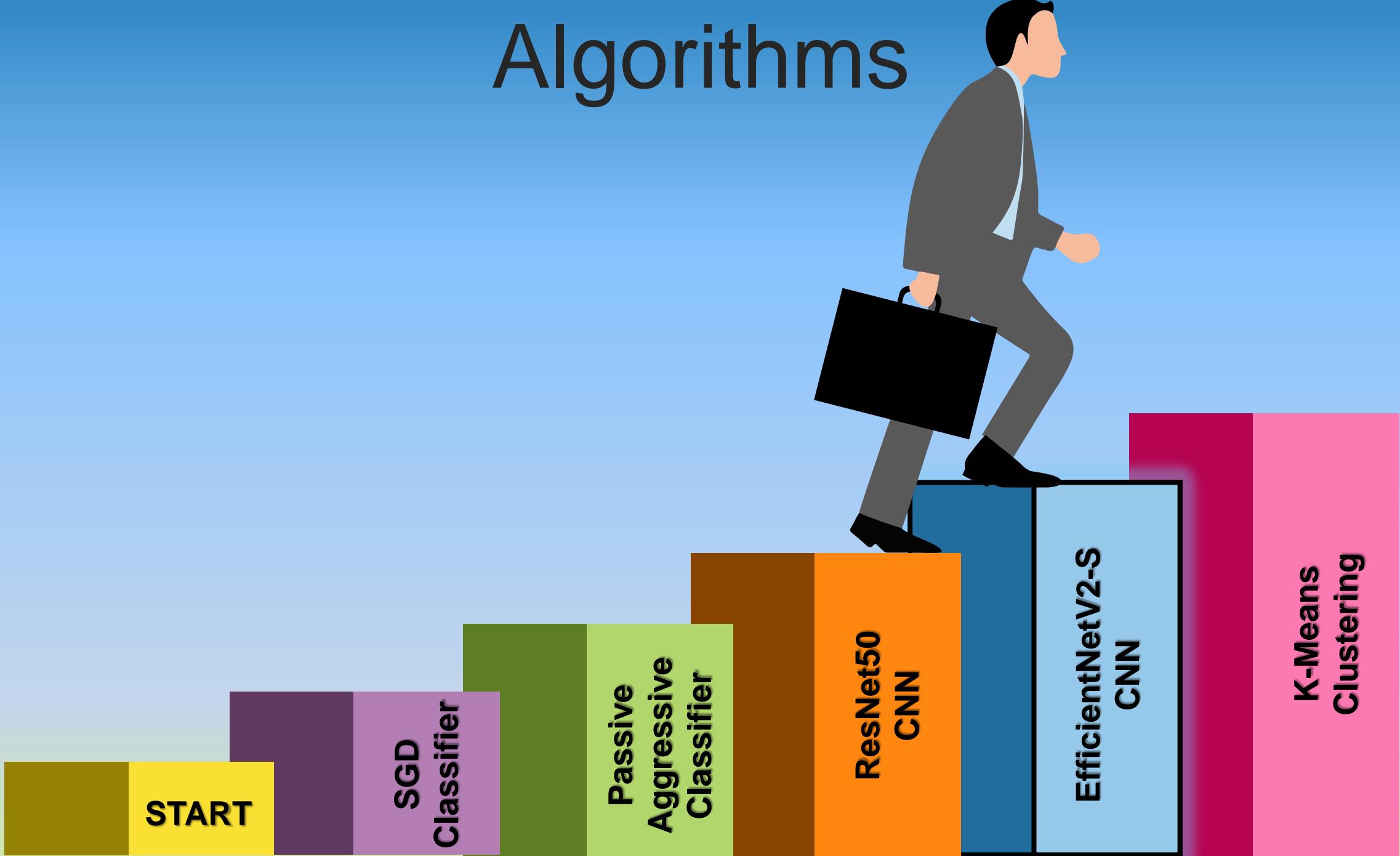
# Algorithms



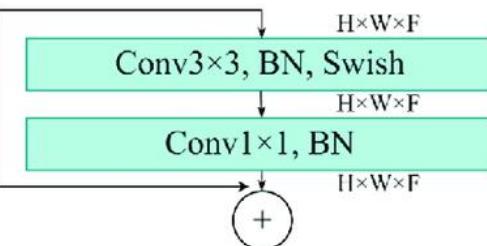
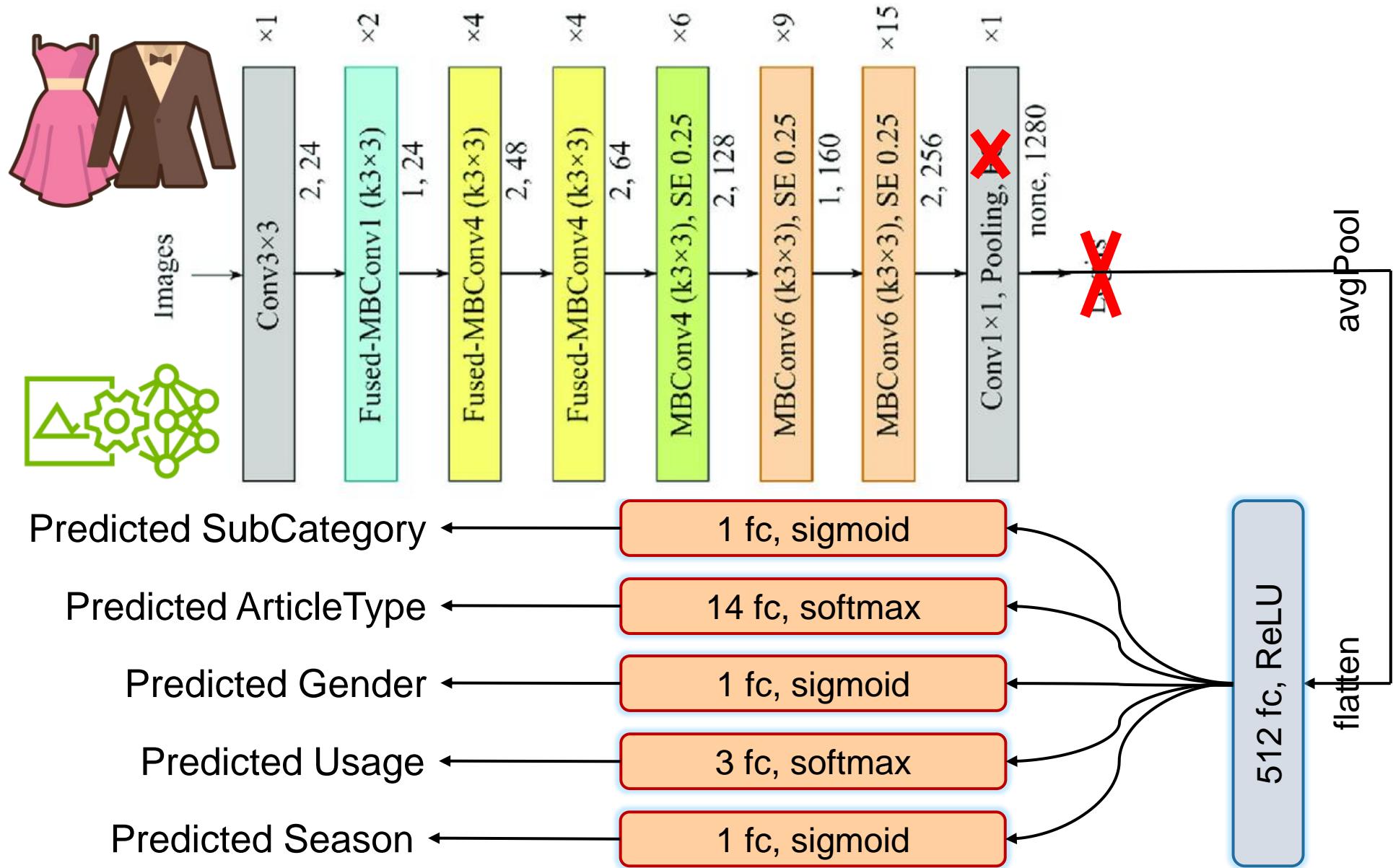
# ResNet50 CNN



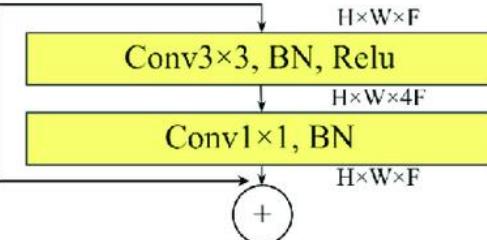
# Algorithms



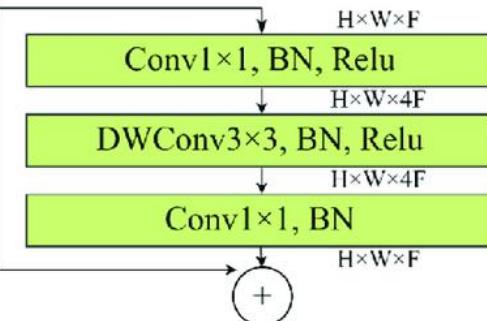
# EfficientNetV2-S CNN



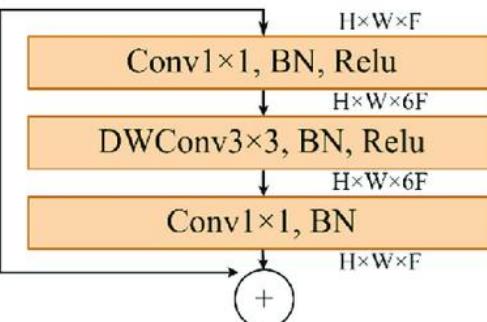
(b) Fused-MBConv1 ( $k3 \times 3$ )



(c) Fused-MBConv4 ( $k3 \times 3$ )

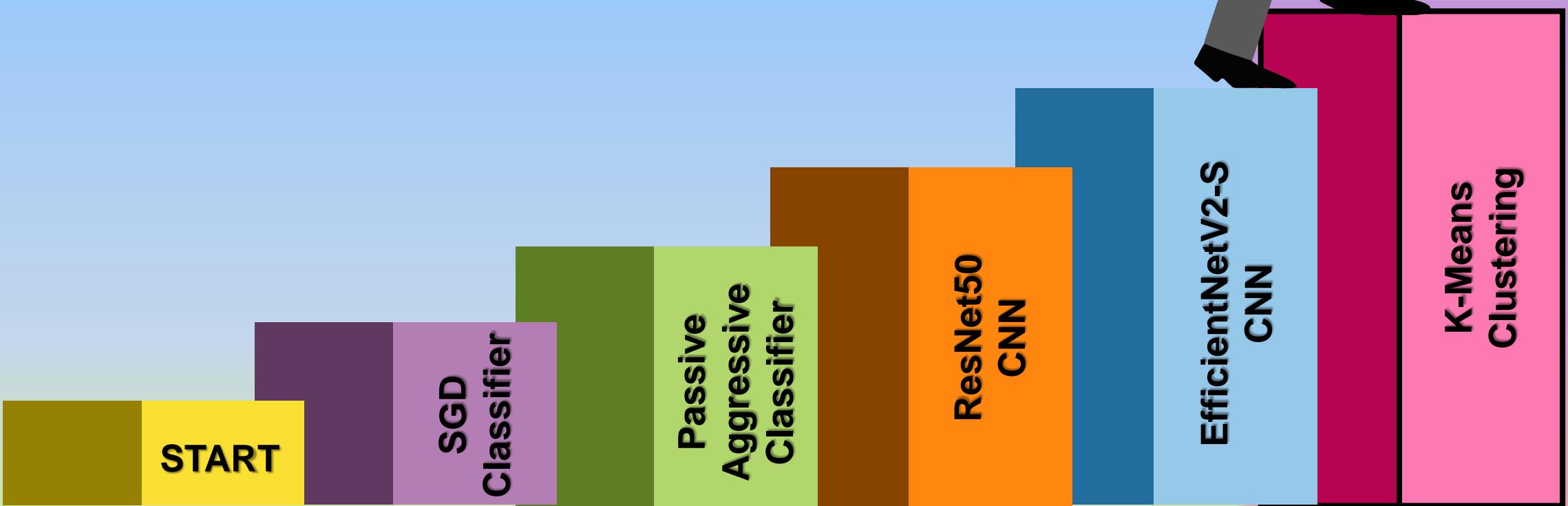


(d) MBConv4 ( $k3 \times 3$ )



(e) MBConv6 ( $k3 \times 3$ )

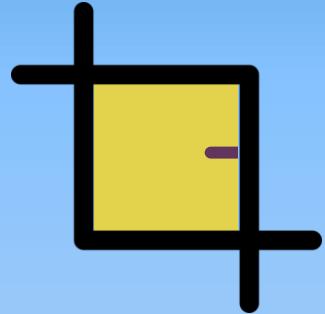
# Algorithms



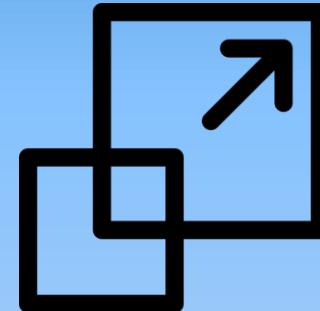
# K-Means Clustering



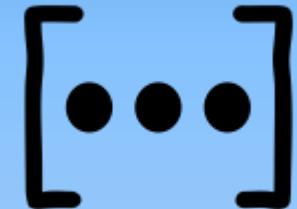
Read Image



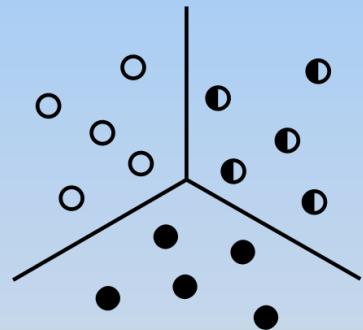
Crop Image



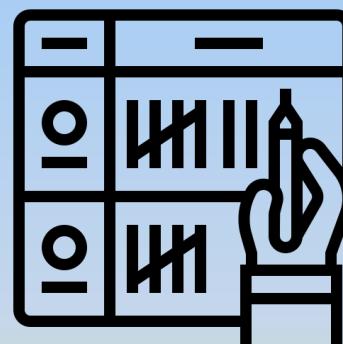
Resize Image



Reshape Image



K-Means on Pixels

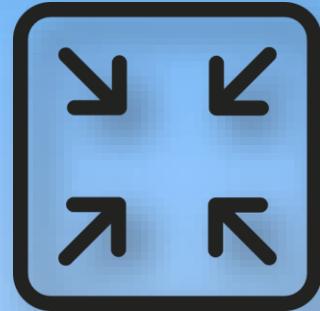


Identify Dominant RGB Color



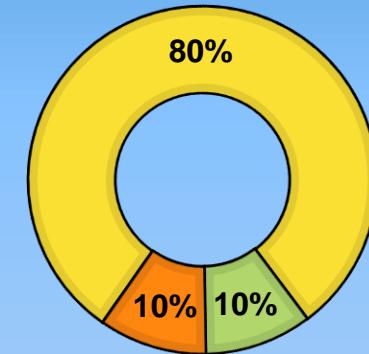
Find Closest Color in Dataset

# Model Setup & Configuration

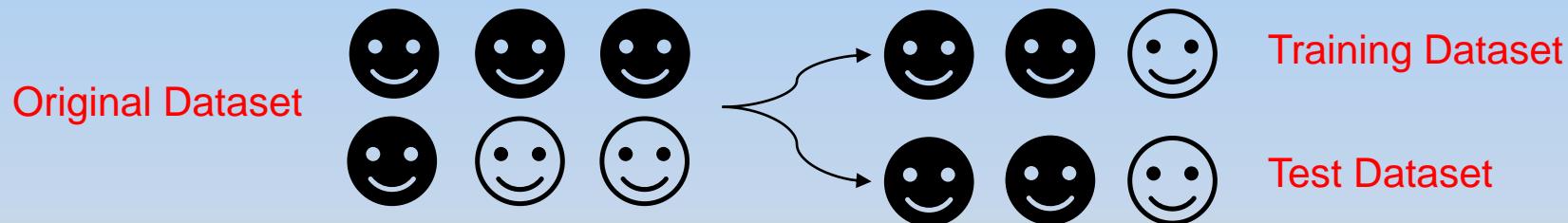


Preprocessing

■ Train ■ Validation ■ Test



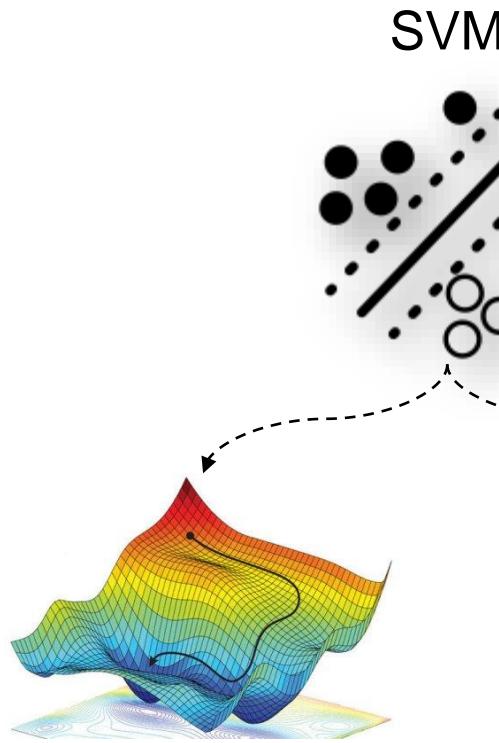
Data Split



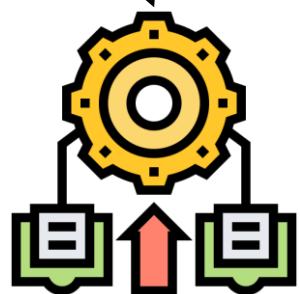
Stratification

# Baseline (SVM) Models

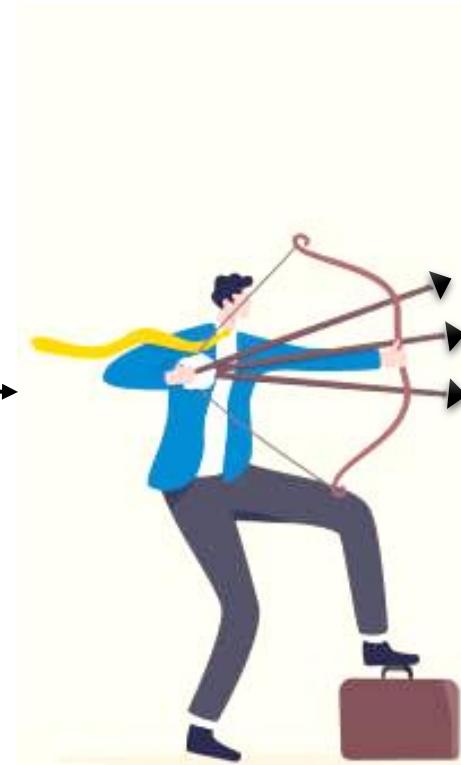
```
partial_fit(X_train, y_train, classes=classes)
```



SGD  
Classifier  
(t=1.5 min)



Passive-Aggressive  
Classifier  
(t=1.5 min)

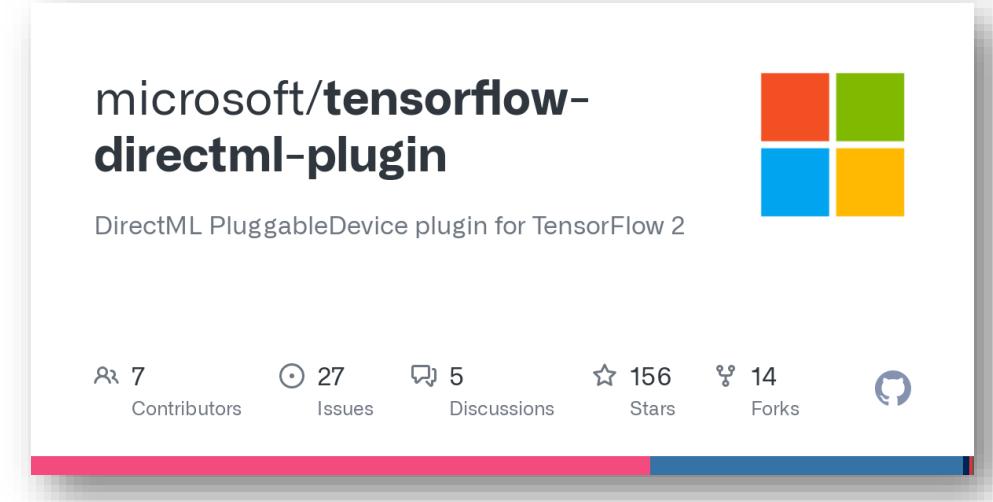
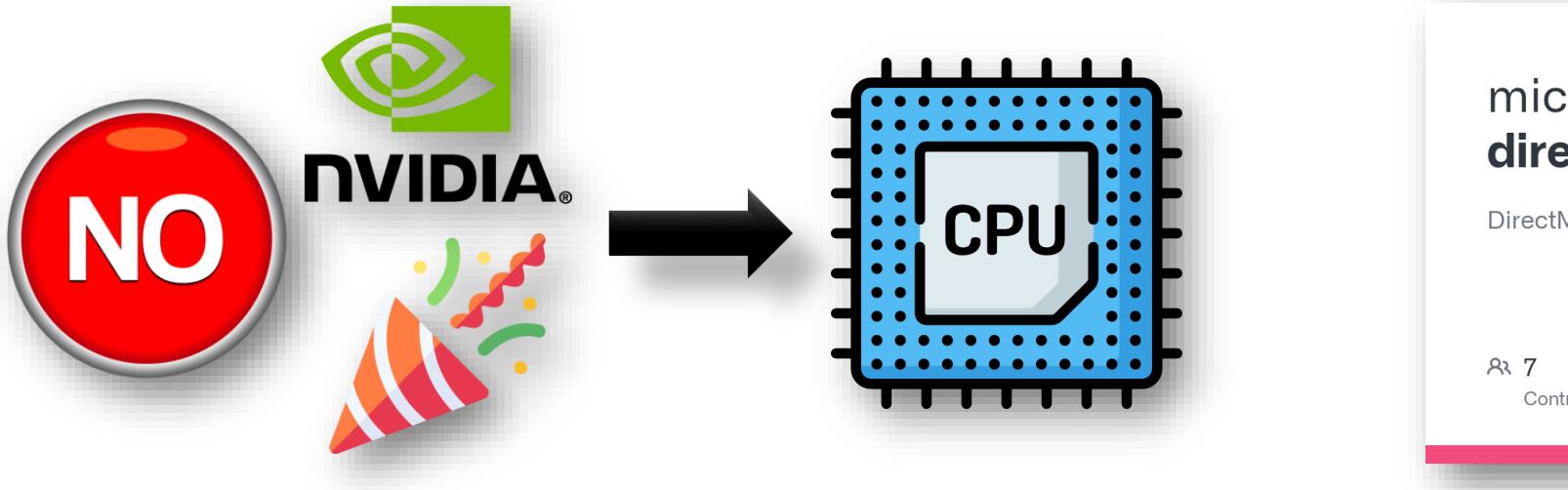


Multi-Output  
Classifier

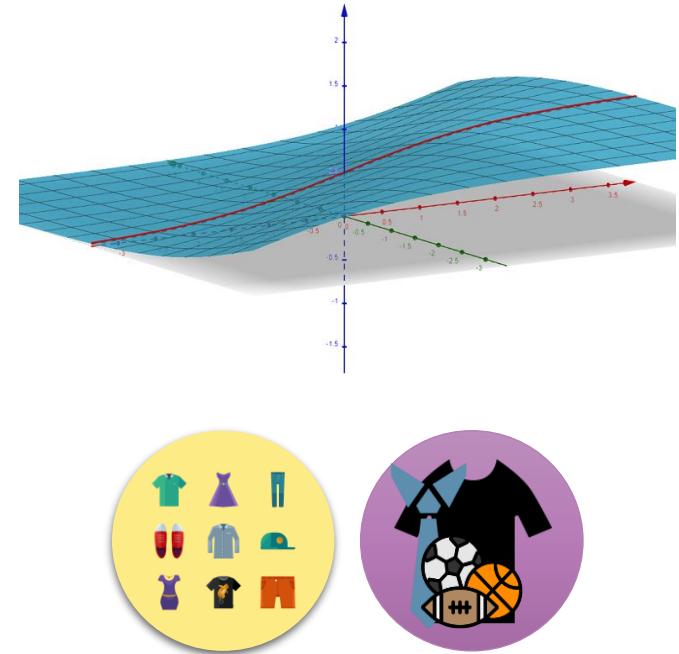




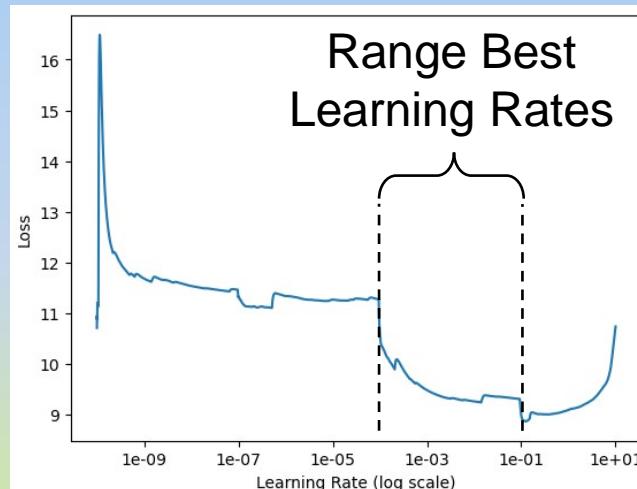
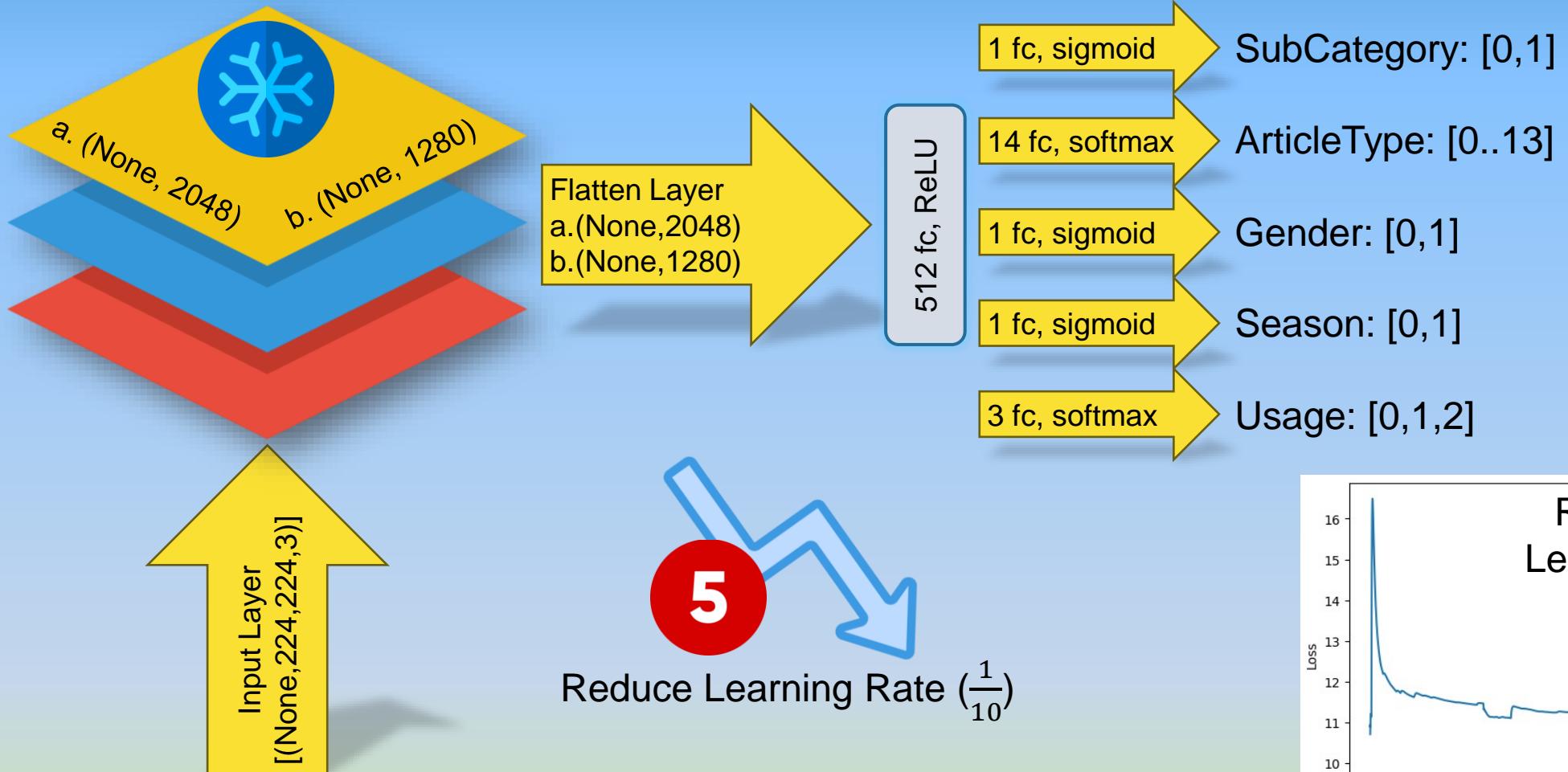
# CNN Models: Challenges



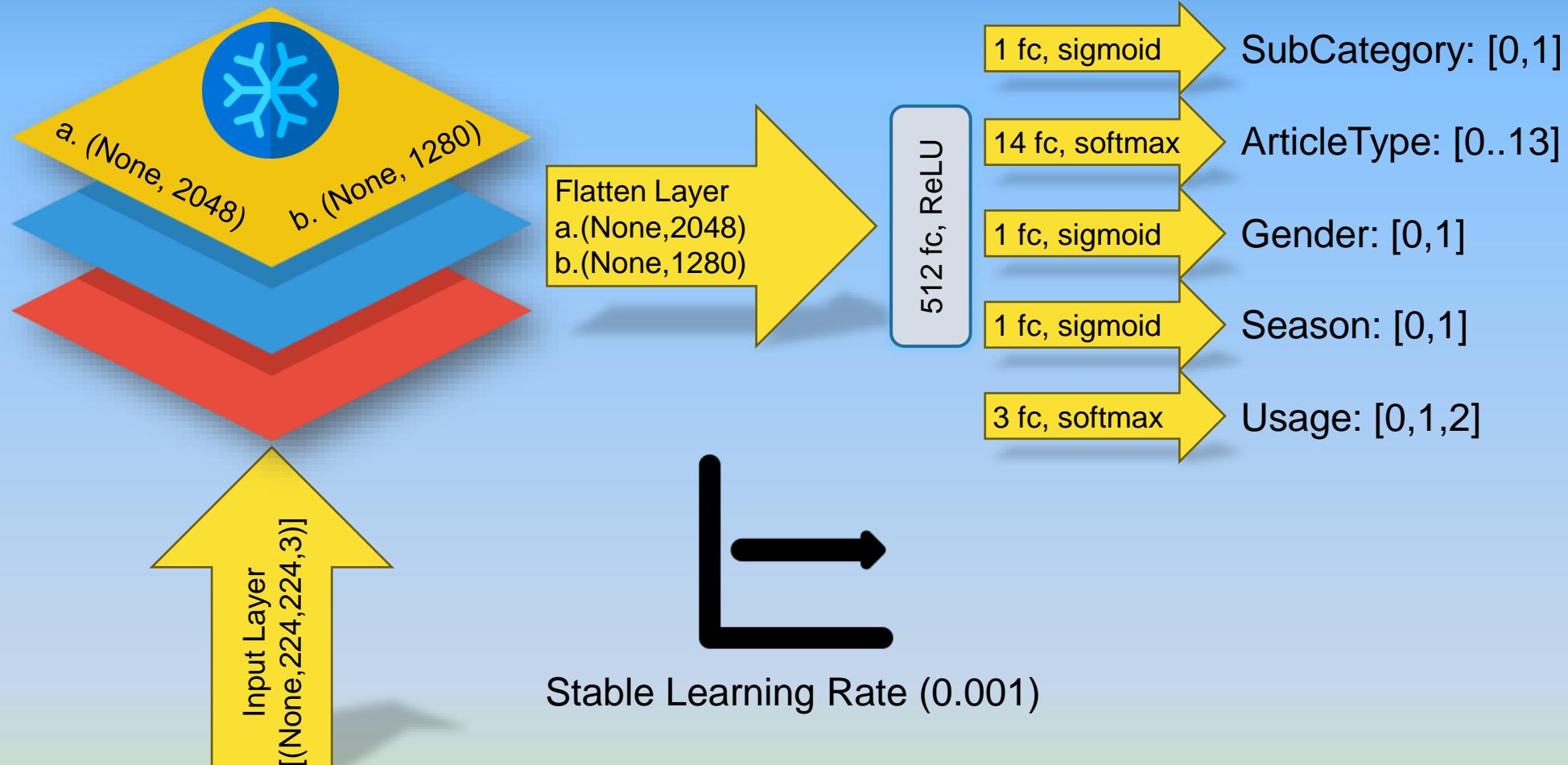
# CNN Models: Common Configurations



# CNN Models: Variant #1

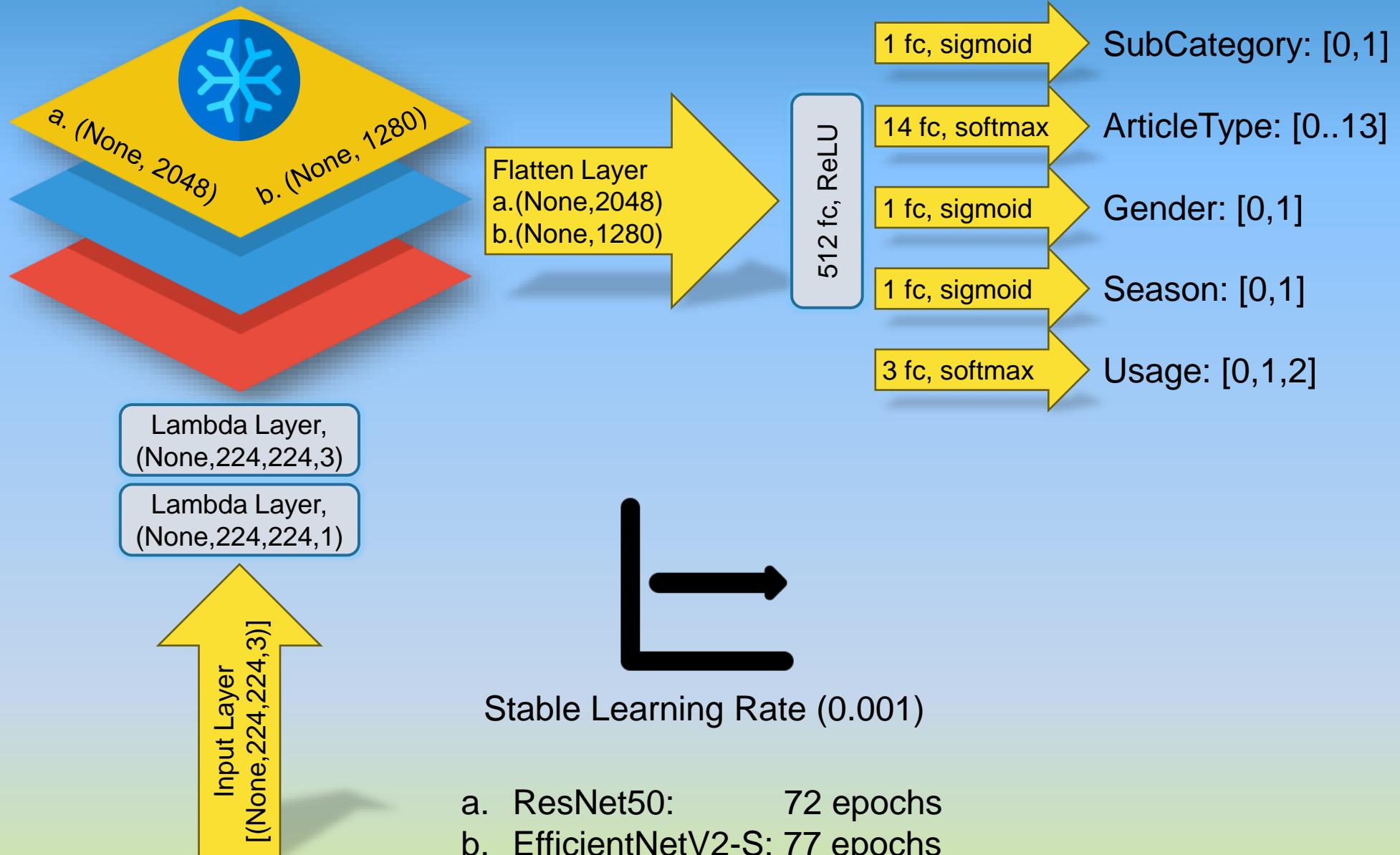


# CNN Models: Variant #2

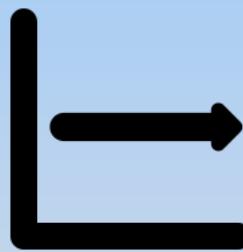
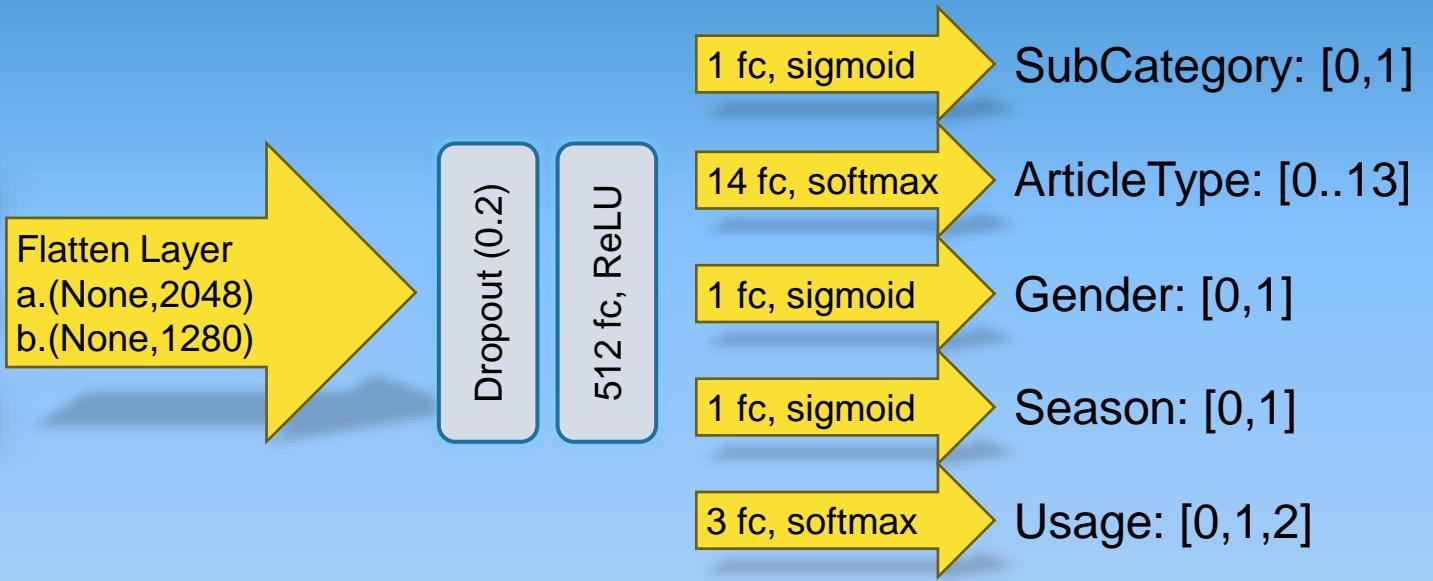
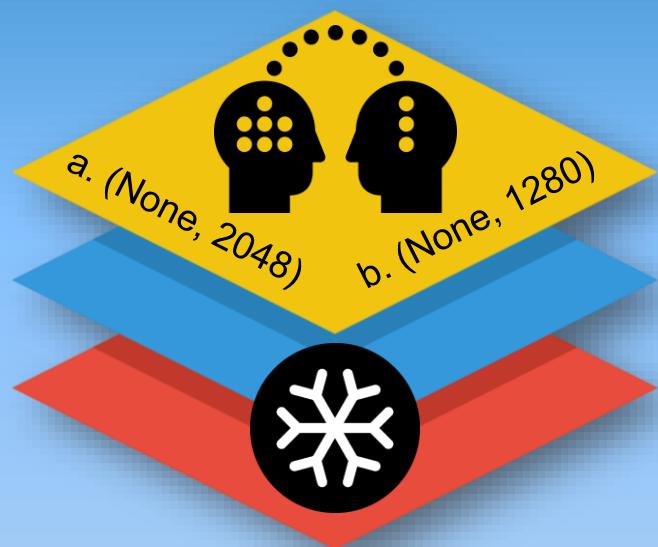


- a. ResNet50: 60 epochs
- b. EfficientNetV2-S: 80 epochs

# CNN Models: Variant #3



# CNN Models: Variant #4



Stable Learning Rate (0.0001)

- a. ResNet50: 25 epochs
- b. EfficientNetV2-S: 35 epochs



# Results & Quantitative Analysis

Accuracy, Loss, Confusion Matrix,  
Classification Report & ROC Curve

# Models Accuracy

Average Output Accuracy per Model and Dataset

Models	Train Avg Output Accuracy	Test Avg Output Accuracy
1. SGD Classifier	69.0	66.6
2. Passive Aggressive Classifier	64.4	63.0

Average Output Accuracy per Model and Dataset

Models	Train Avg Output Accuracy	Evaluation Avg Output Accuracy	Test Avg Output Accuracy
1. EfficientNetv2-S Model with Reduce LR	81.0	80.3	79.8
2. ResNet50 Model with Reduce LR	82.0	79.2	79.1
3. EfficientNetv2-S Model without changing LR	85.8	82.8	82.6
4. ResNet50 Model without changing LR	86.6	81.4	81.6
5. EfficientNetv2-S Model Grayscale Images	85.6	82.2	82.4
6. ResNet50 Model Grayscale Images	87.2	82.5	82.1
7. EfficientNetv2-S Model Grayscale with Trainable Top Pre-Trained Layers	96.4	90.0	90.7
8. ResNet50 Model Grayscale with Trainable Top Pre-Trained Layers	80.4	78.5	78.7

# CNN Models Loss

## Loss per Model and Dataset

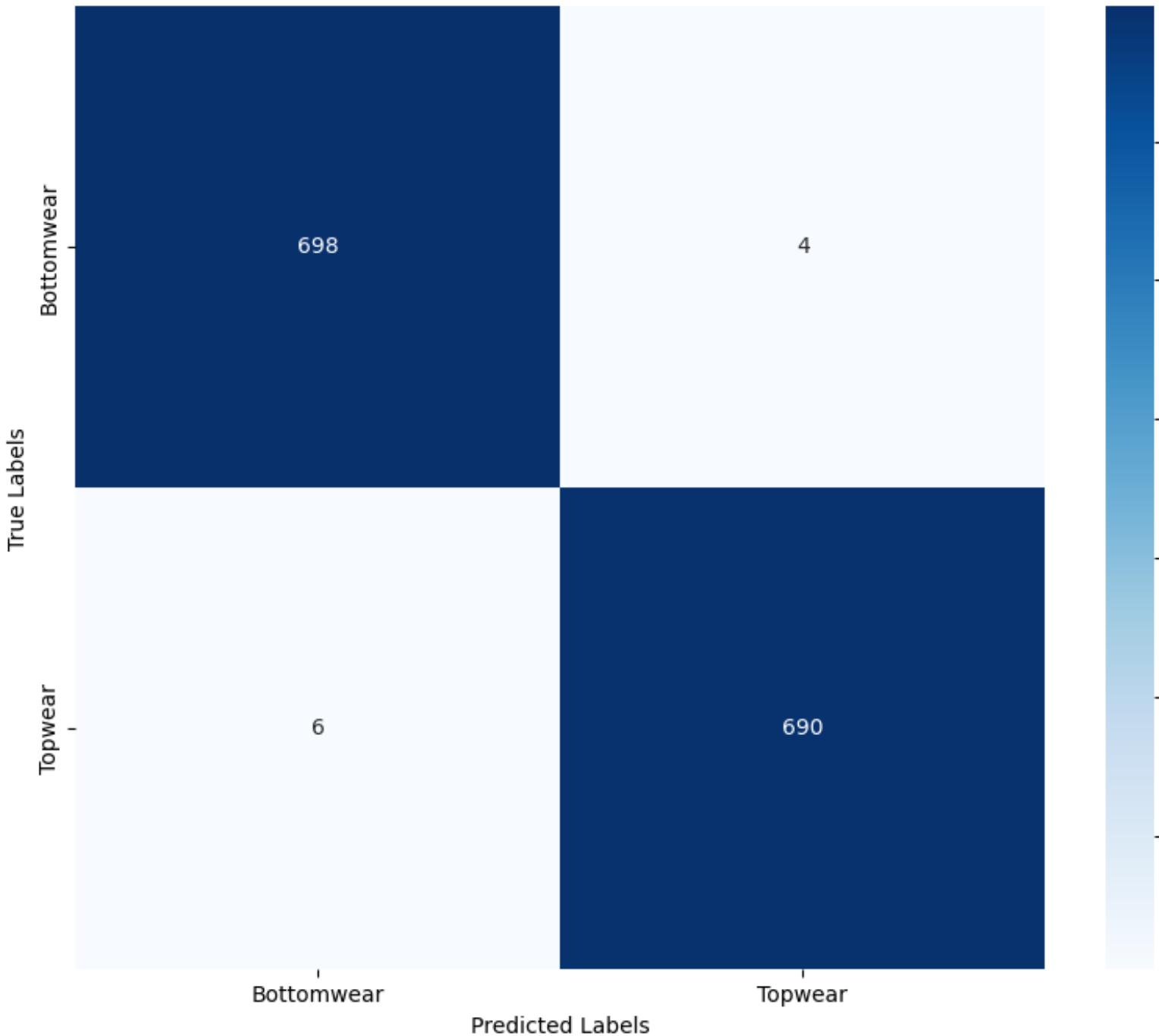
Models	Train Loss	Evaluation Loss	Test Loss
1. EfficientNetv2-S Model with Reduce LR	2.26	2.38	2.37
2. ResNet50 Model with Reduce LR	2.13	2.50	2.47
3. EfficientNetv2-S Model without changing LR	1.72	2.11	2.08
4. ResNet50 Model without changing LR	1.62	2.26	2.18
5. EfficientNetv2-S Model Grayscale Images	1.77	2.12	2.09
6. ResNet50 Model Grayscale Images	1.55	2.16	2.18
7. EfficientNetv2-S Model Grayscale with Trainable Top Pre-Trained Layers	0.51	1.28	1.20
8. ResNet50 Model Grayscale with Trainable Top Pre-Trained Layers	2.39	2.61	2.60



# SubCategory: Confusion Matrix

---

SubCategory Confusion Matrix



## SubCategory ROC Curve

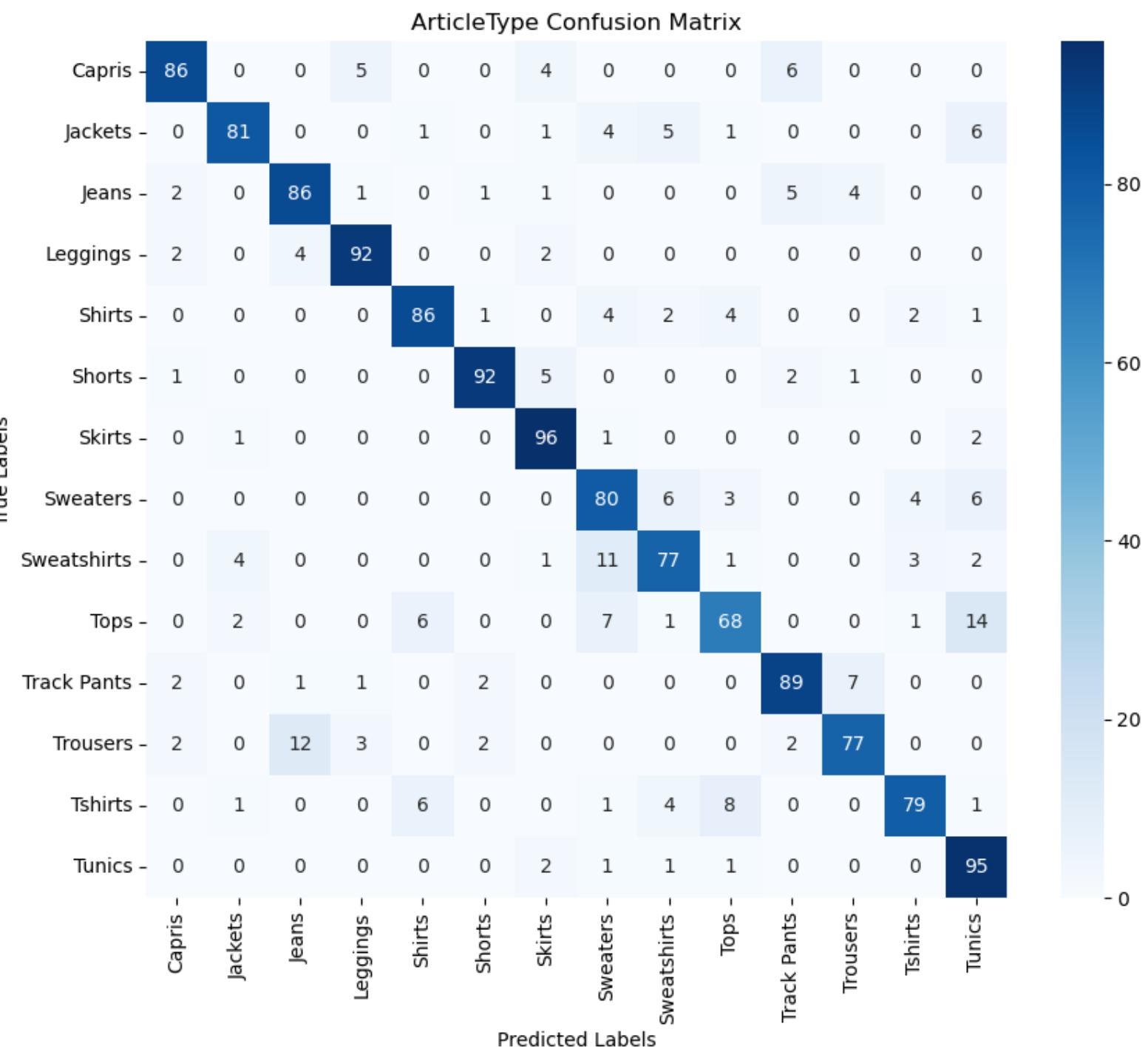


### SubCategory Classification Report:

	precision	recall	f1-score	support
Bottomwear	0.99	0.99	0.99	702
Topwear	0.99	0.99	0.99	696
accuracy			0.99	1398
macro avg	0.99	0.99	0.99	1398
weighted avg	0.99	0.99	0.99	1398

# SubCategory: Classification Report & ROC Curve

# ArticleType: Confusion Matrix

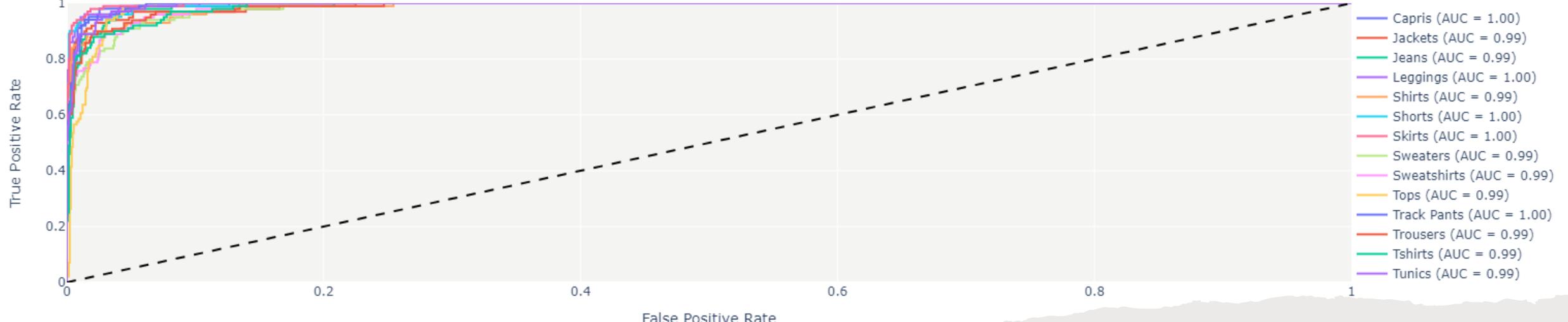


# ArticleType: Classification Report & ROC Curve

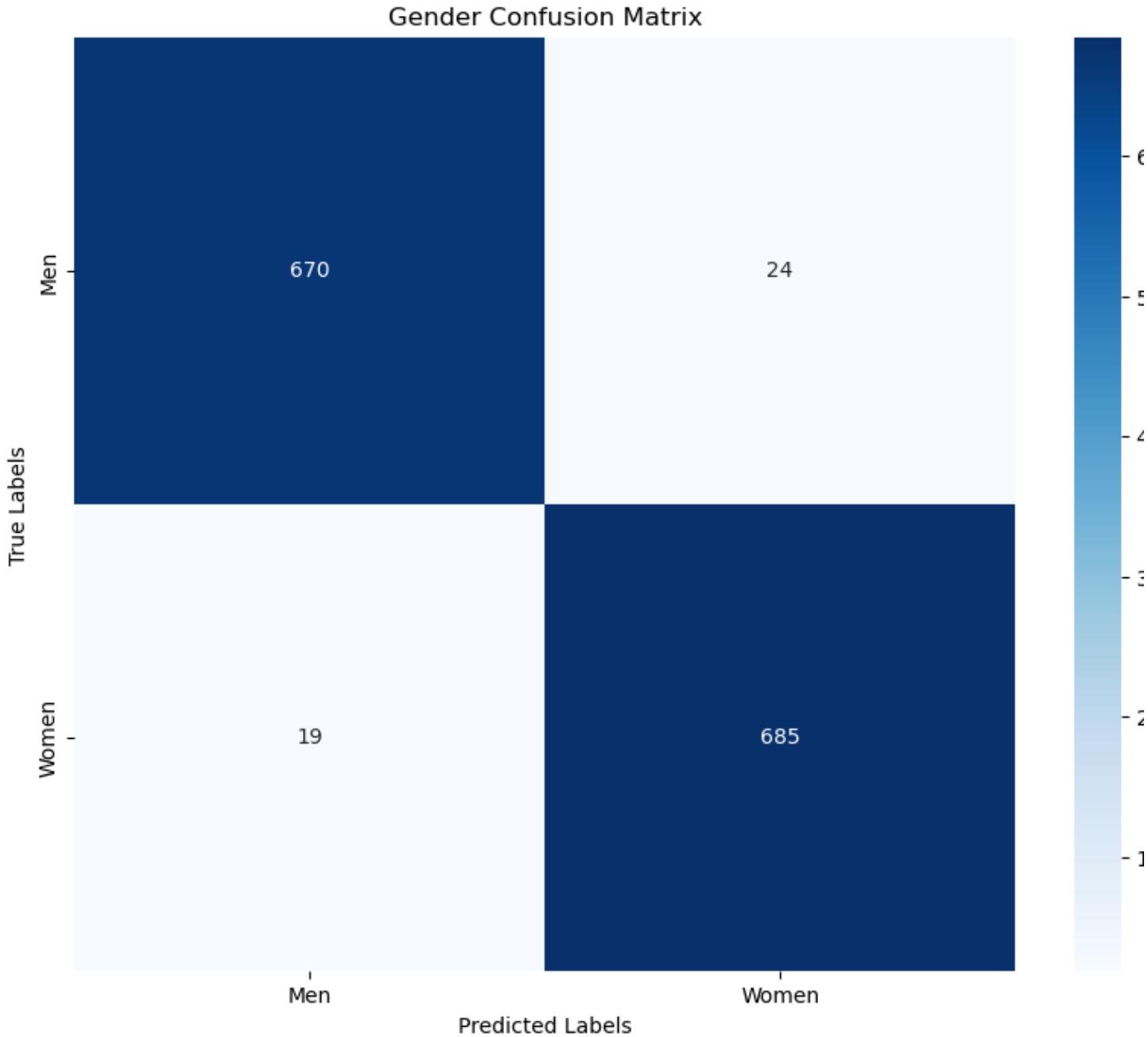
ArticleType Classification Report:

	precision	recall	f1-score	support
Capris	0.91	0.85	0.88	101
Jackets	0.91	0.82	0.86	99
Jeans	0.83	0.86	0.85	100
Leggings	0.90	0.92	0.91	100
Shirts	0.87	0.86	0.86	100
Shorts	0.94	0.91	0.92	101
Skirts	0.86	0.96	0.91	100
Sweaters	0.73	0.81	0.77	99
Sweatshirts	0.80	0.78	0.79	99
Tops	0.79	0.69	0.74	99
Track Pants	0.86	0.87	0.86	102
Trousers	0.87	0.79	0.82	98
Tshirts	0.89	0.79	0.84	100
Tunics	0.75	0.95	0.84	100
accuracy			0.85	1398
macro avg	0.85	0.85	0.85	1398
weighted avg	0.85	0.85	0.85	1398

ArticleType ROC Curve



# Gender: Confusion Matrix



## Gender ROC Curve



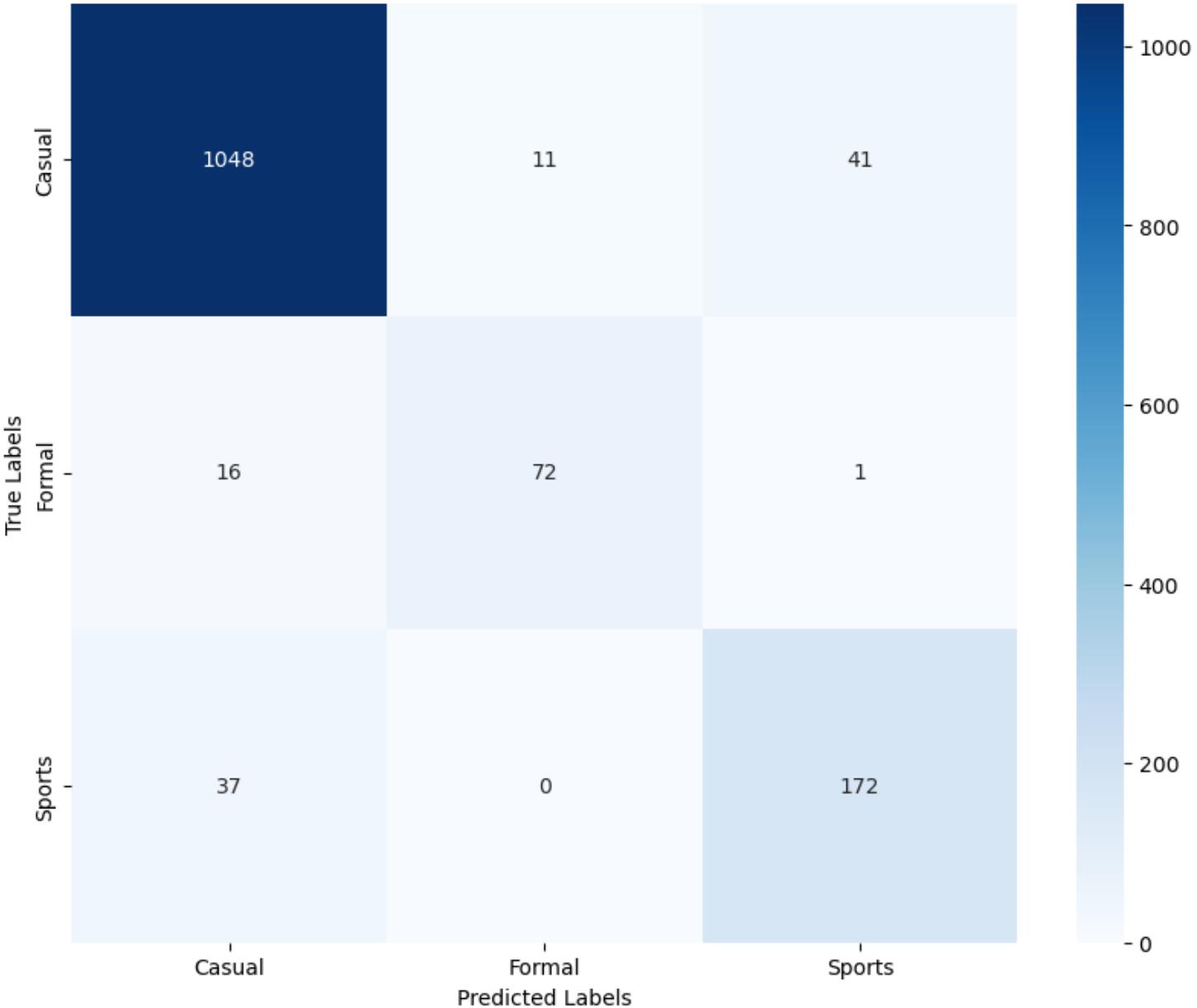
### Gender Classification Report:

		precision	recall	f1-score	support
	Men	0.97	0.97	0.97	694
	Women	0.97	0.97	0.97	704
	accuracy			0.97	1398
	macro avg	0.97	0.97	0.97	1398
	weighted avg	0.97	0.97	0.97	1398

# Gender: Classification Report & ROC Curve

# Usage: Confusion Matrix

Usage Confusion Matrix



## Usage ROC Curve



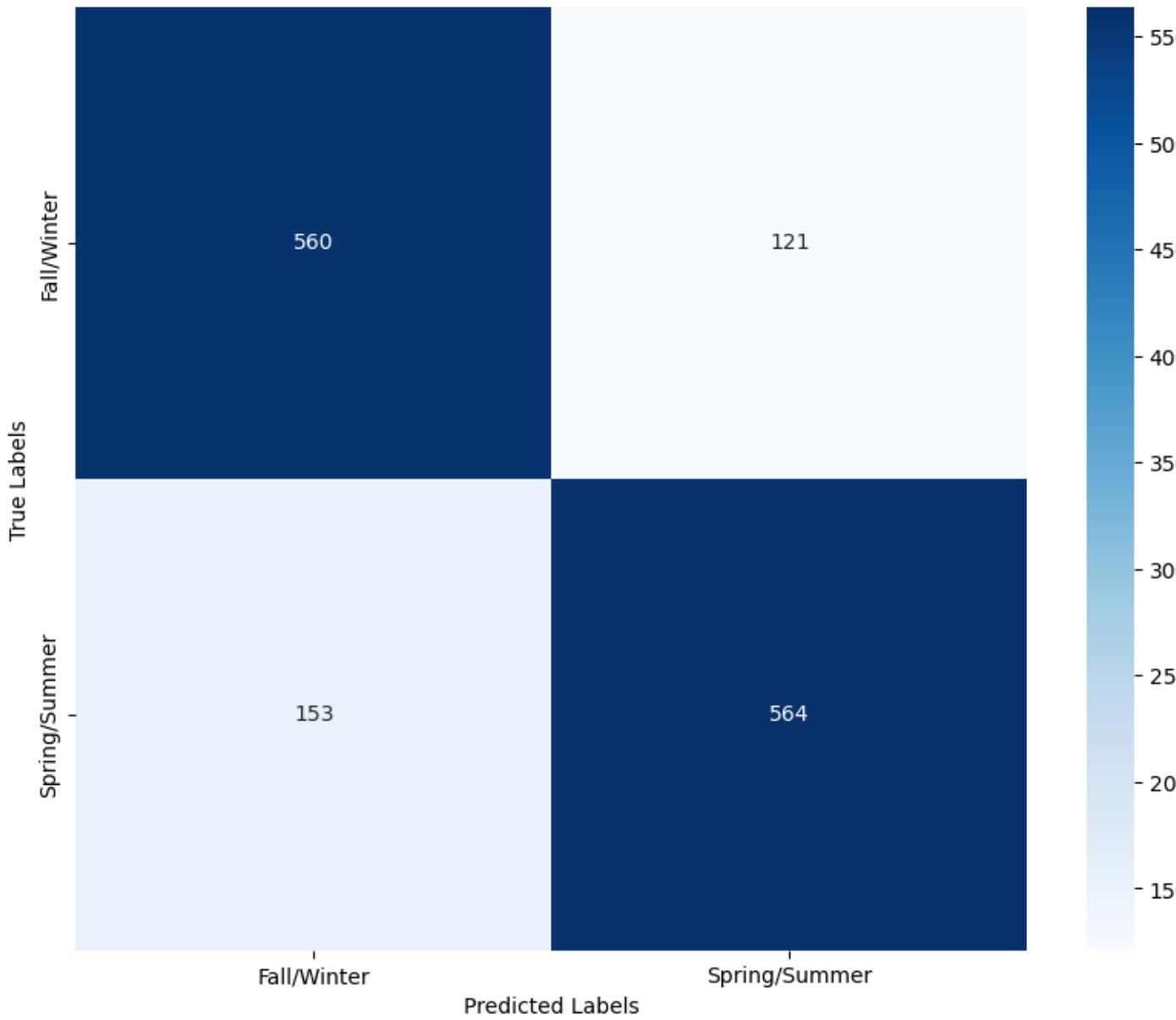
### Usage Classification Report:

	precision	recall	f1-score	support
Casual	0.95	0.95	0.95	1100
Formal	0.87	0.81	0.84	89
Sports	0.80	0.82	0.81	209
accuracy			0.92	1398
macro avg	0.87	0.86	0.87	1398
weighted avg	0.92	0.92	0.92	1398

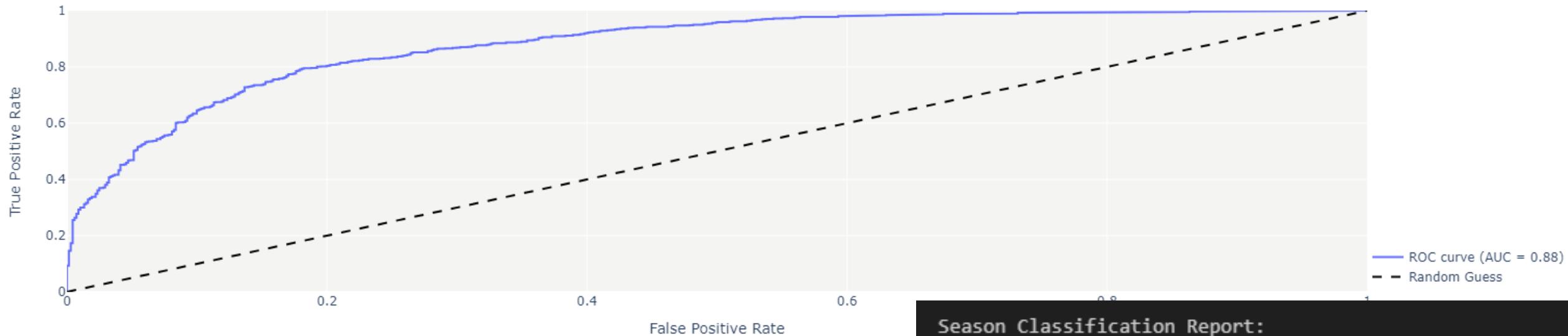
# Usage: Classification Report & ROC Curve

# Season: Confusion Matrix

Season Confusion Matrix



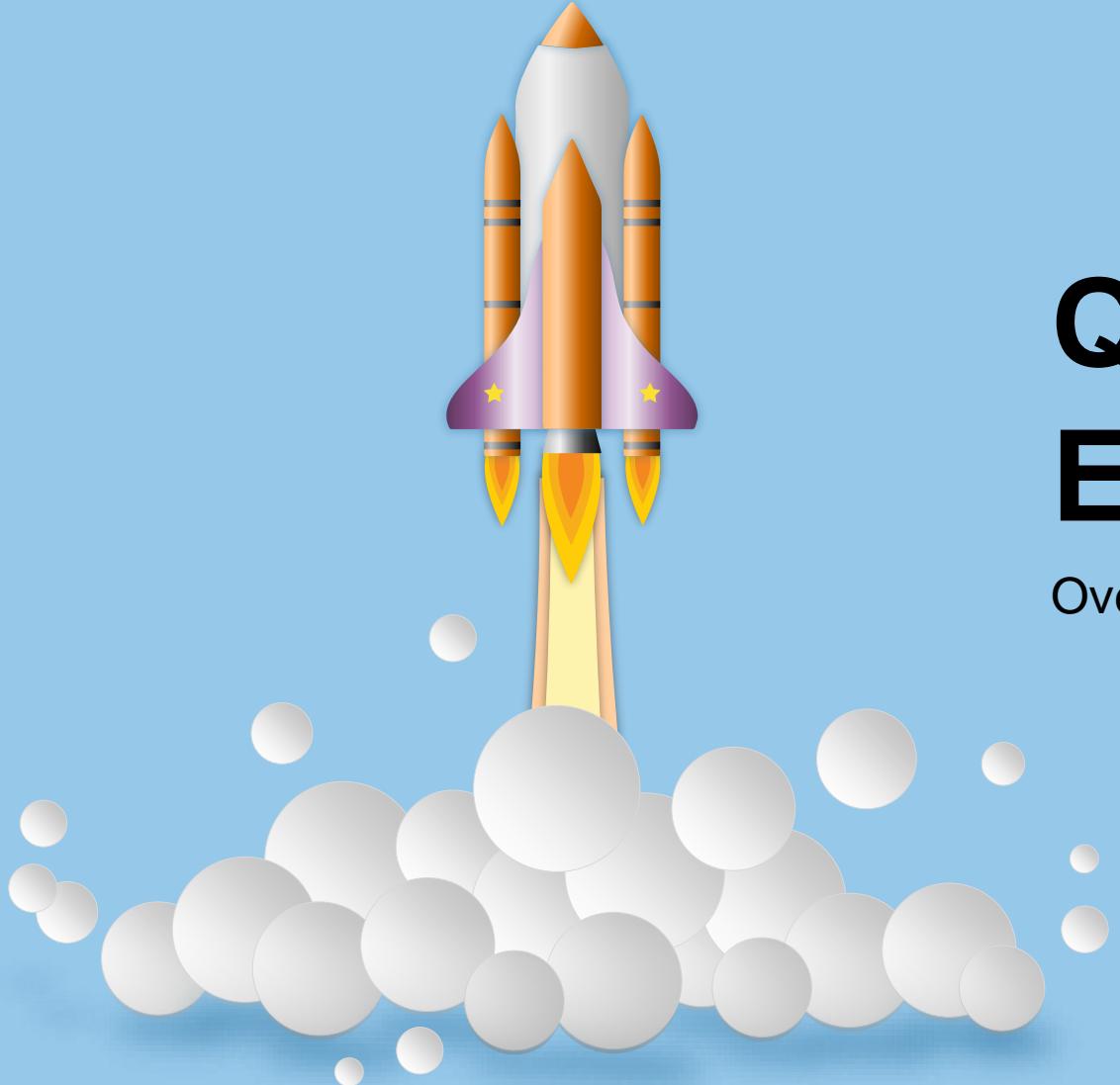
Season ROC Curve



#### Season Classification Report:

	precision	recall	f1-score	support
Fall/Winter	0.79	0.82	0.80	681
Spring/Summer	0.82	0.79	0.80	717
accuracy			0.80	1398
macro avg	0.80	0.80	0.80	1398
weighted avg	0.80	0.80	0.80	1398

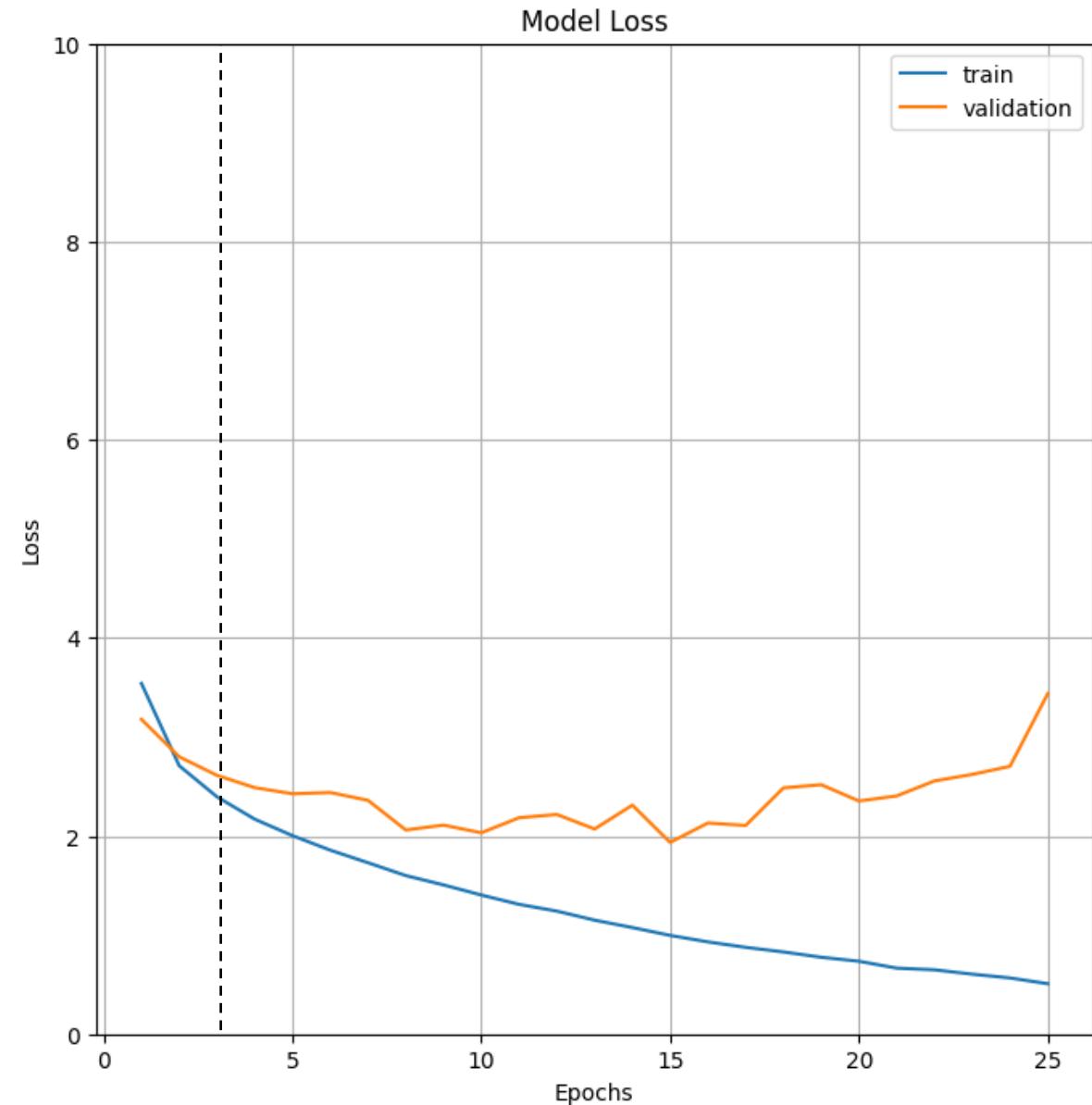
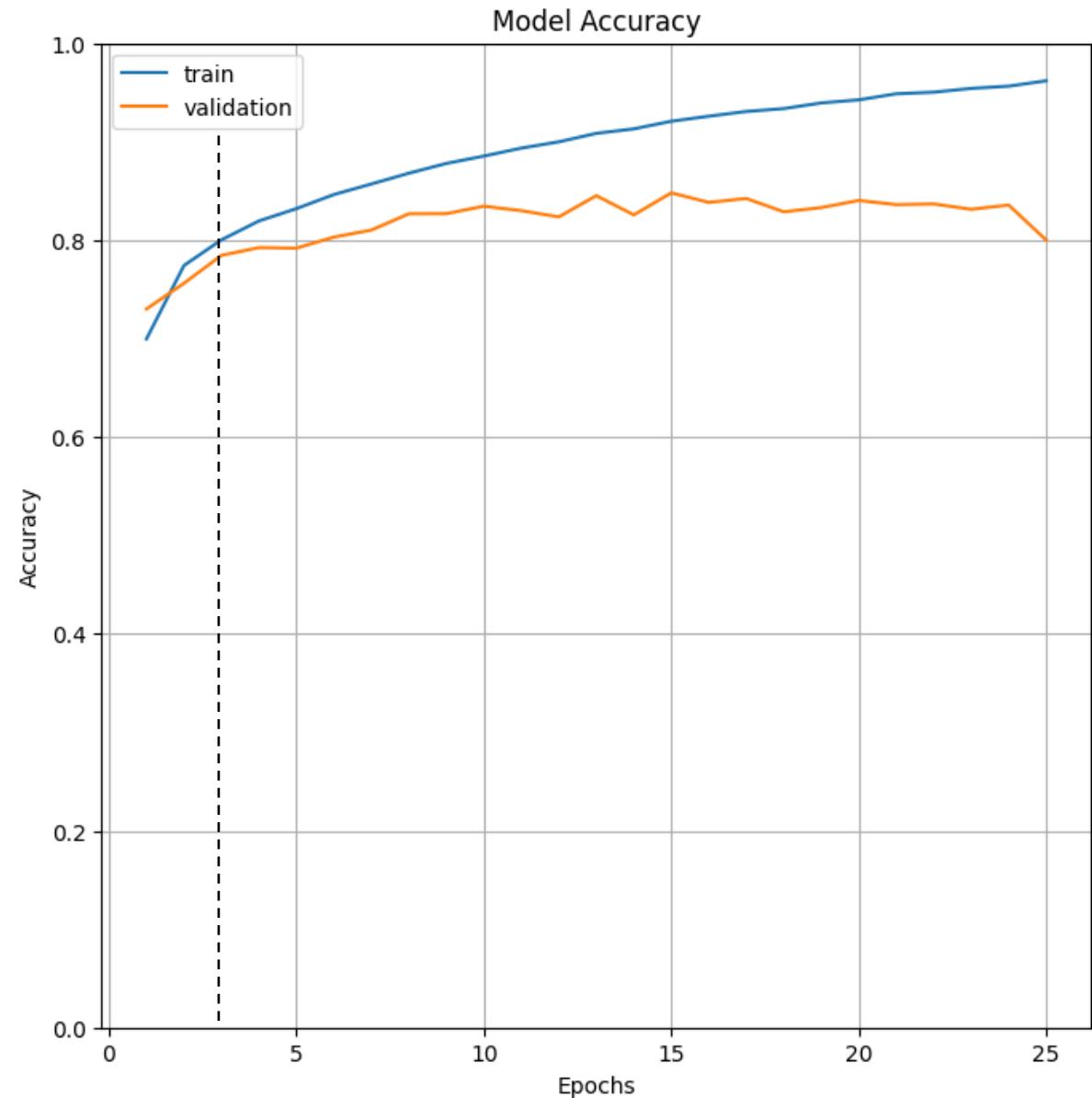
# Season: Classification Report & ROC Curve



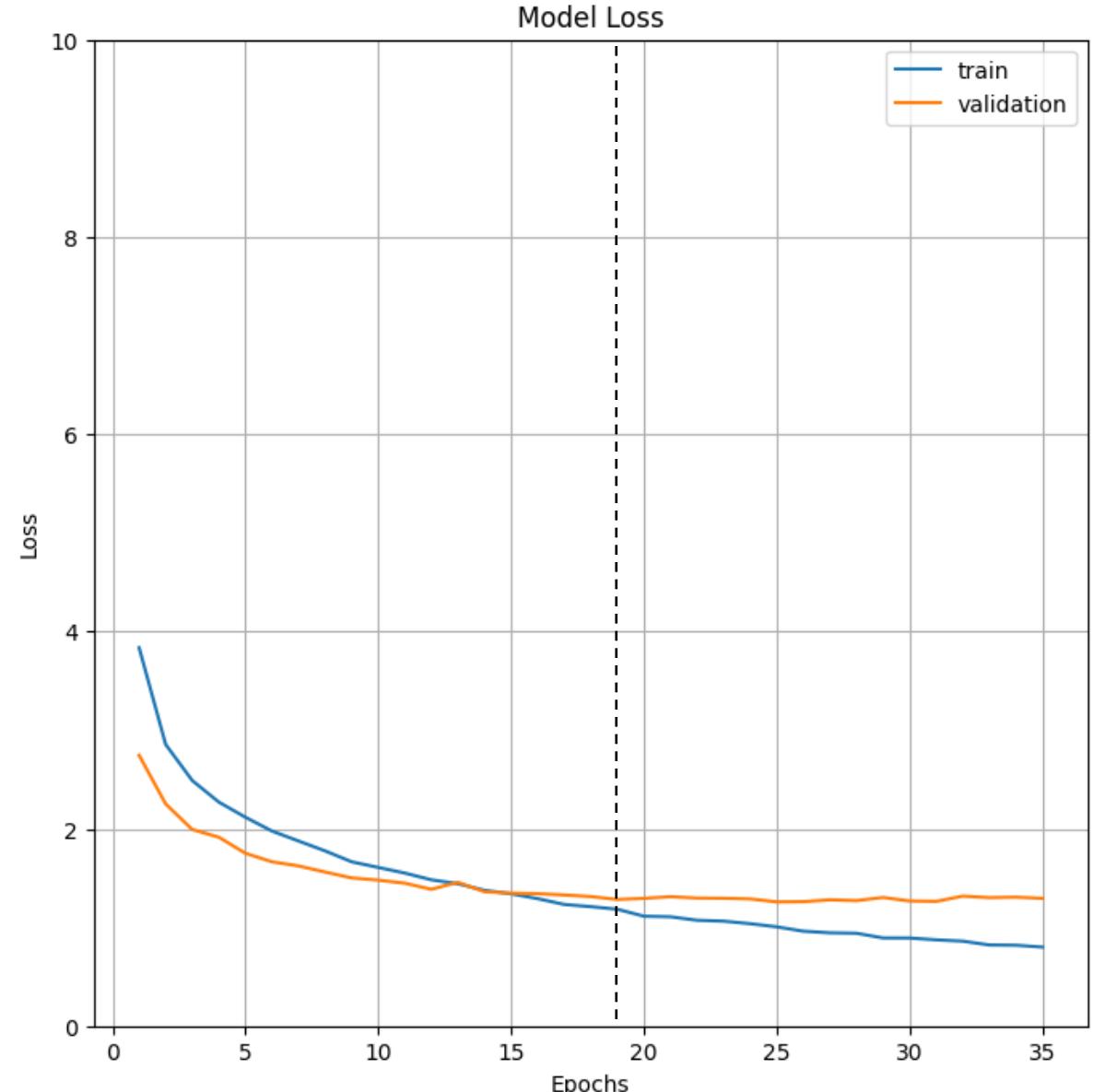
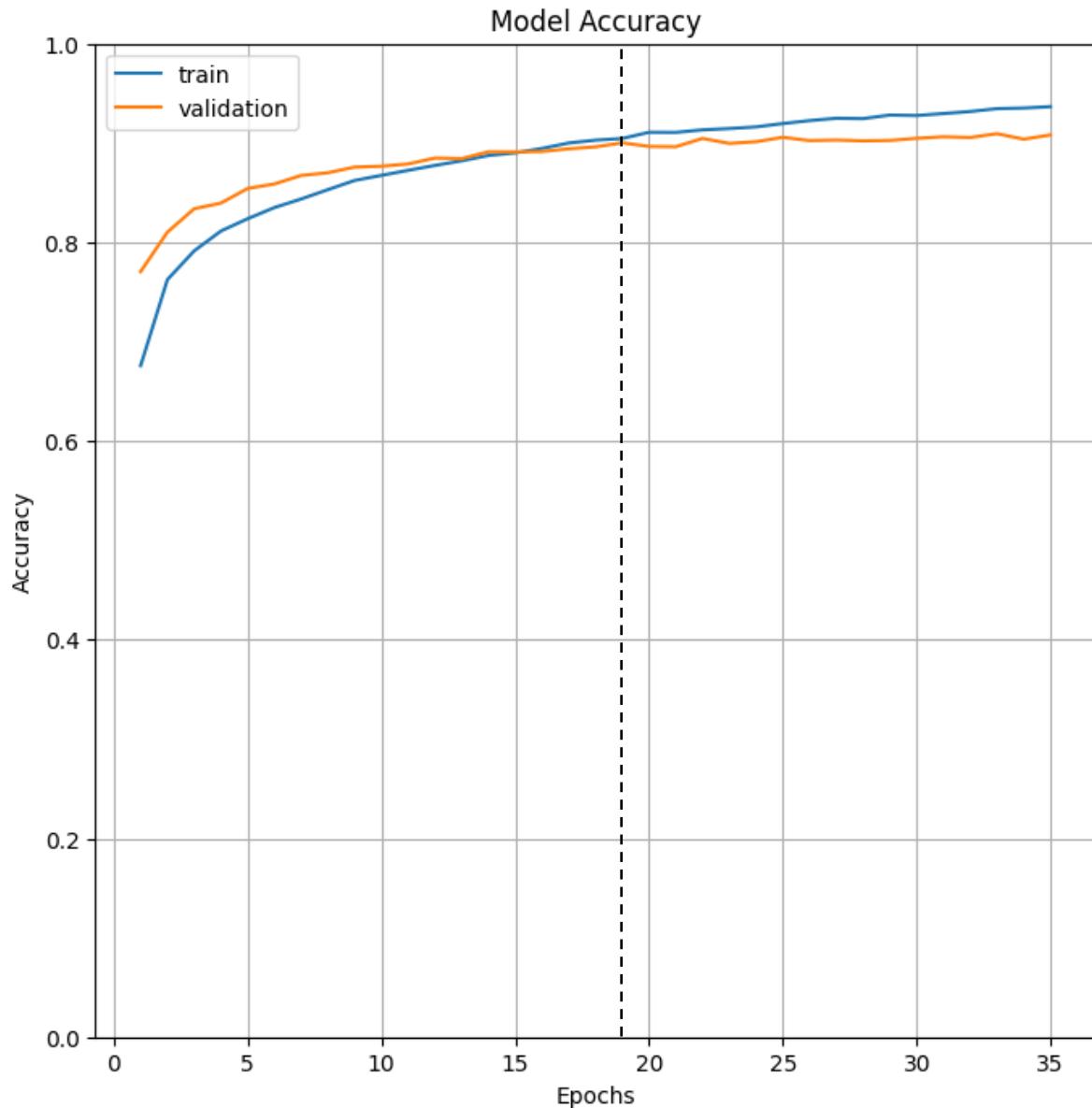
# Qualitative & Error Analysis

Overfitting, Season Output Misclassification

# Resnet50 Overfitting Signs

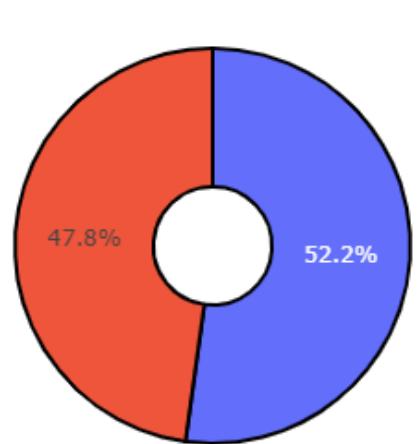


# EfficientNetV2-S Overfitting Signs



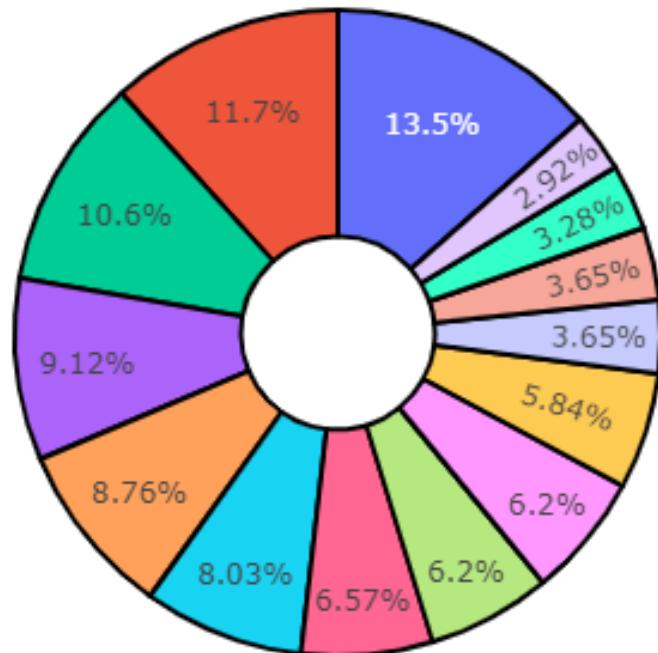
# Season Output Misclassification

Distribution for gender

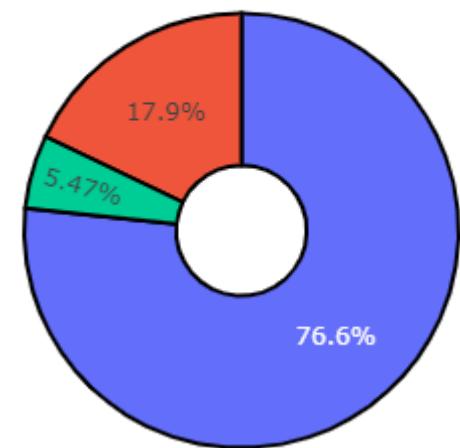


■ Women  
■ Men

Distribution for articleType

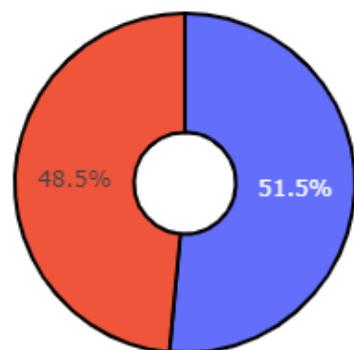


Distribution for usage



■ Casual  
■ Sports  
■ Formal

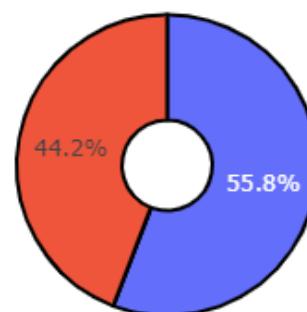
Distribution for subCategory



■ Topwear  
■ Bottomwear

■ Tops  
■ Tshirts  
■ Track Pant  
■ Shorts  
■ Trousers  
■ Jeans  
■ Tunics  
■ Jackets  
■ Shirts  
■ Capris  
■ Sweaters  
■ Sweatshirts  
■ Leggings  
■ Skirts

Distribution for season



■ Spring/Summer  
■ Fall/Winter

ID: 42267  
True: Fall/Winter



ID: 14941  
True: Fall/Winter



ID: 28678  
True: Spring/Summer



ID: 32444  
True: Fall/Winter



ID: 8835  
True: Spring/Summer



ID: 23457  
True: Spring/Summer



ID: 4775  
True: Spring/Summer



ID: 21593  
True: Spring/Summer



ID: 7433  
True: Spring/Summer



ID: 17996  
True: Spring/Summer



ID: 15124  
True: Fall/Winter



ID: 20373  
True: Fall/Winter



ID: 39124  
True: Fall/Winter



ID: 6884  
True: Spring/Summer



ID: 26521  
True: Spring/Summer



ID: 13437  
True: Spring/Summer

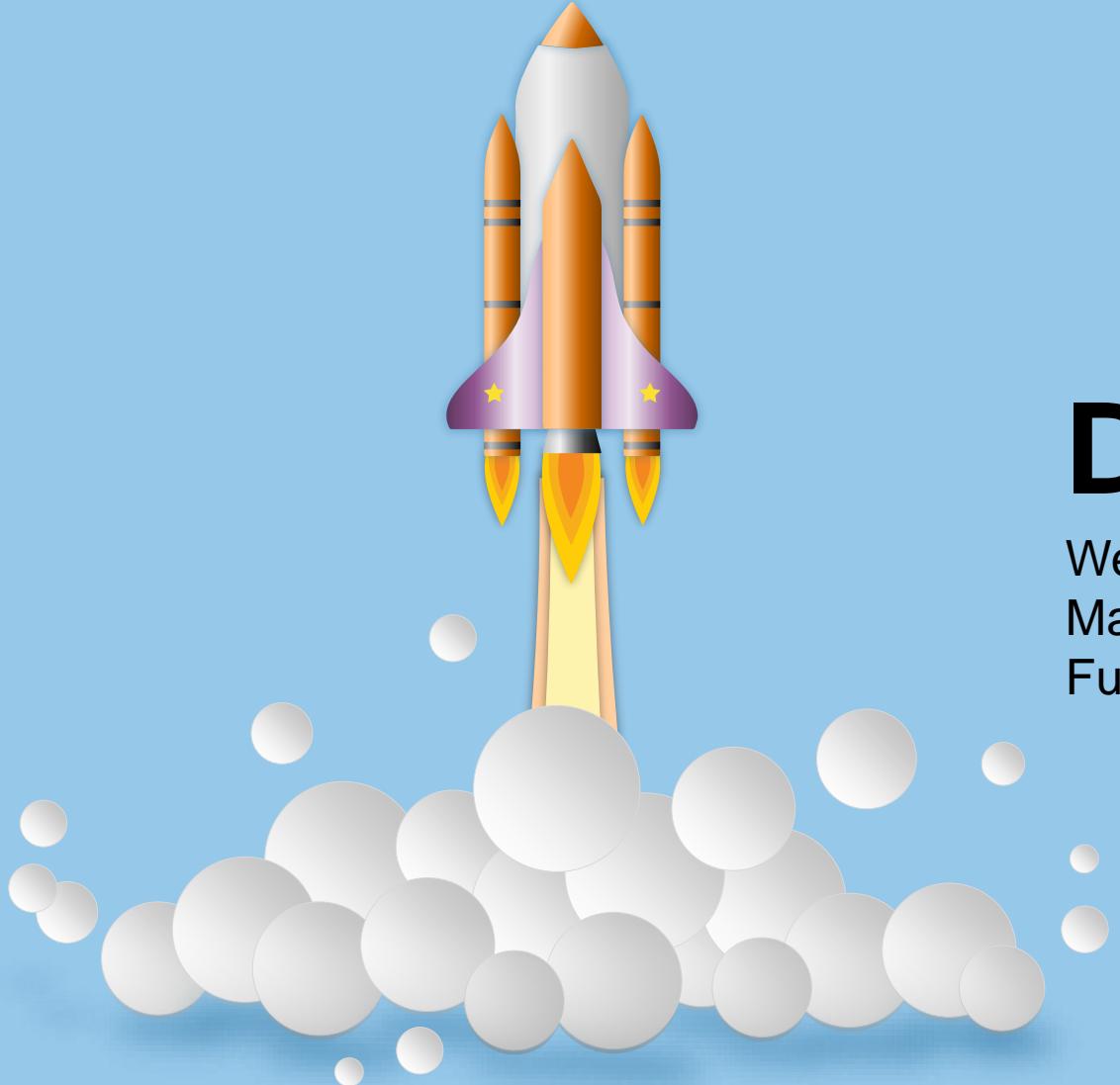


ID: 19539  
True: Spring/Summer



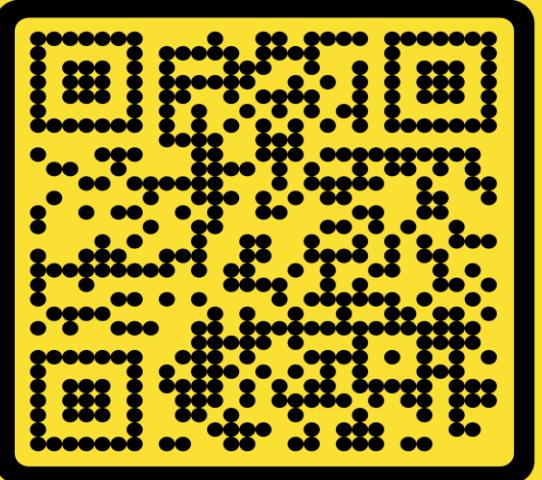
ID: 19860  
True: Fall/Winter



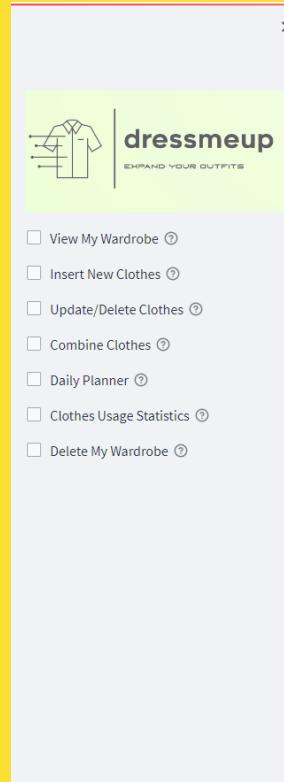


# Discussion

Web App Development, Mobile App Mockup,  
Market Validation, Revenue Streams &  
Future Work



 DressMeApp



A screenshot of a sidebar from a Streamlit application. The sidebar has a light gray background and a red header bar at the top. On the left, there is a small icon of a shirt and pants. To its right, the text "dressmeup" is written in bold green letters, with "EXPAND YOUR OUTFITS" in smaller black letters below it. A close button ("X") is located at the top right of the sidebar. Below the logo, there is a list of seven options, each preceded by an unchecked checkbox:

- View My Wardrobe ⓘ
- Insert New Clothes ⓘ
- Update/Delete Clothes ⓘ
- Combine Clothes ⓘ
- Daily Planner ⓘ
- Clothes Usage Statistics ⓘ
- Delete My Wardrobe ⓘ

## dressmeup

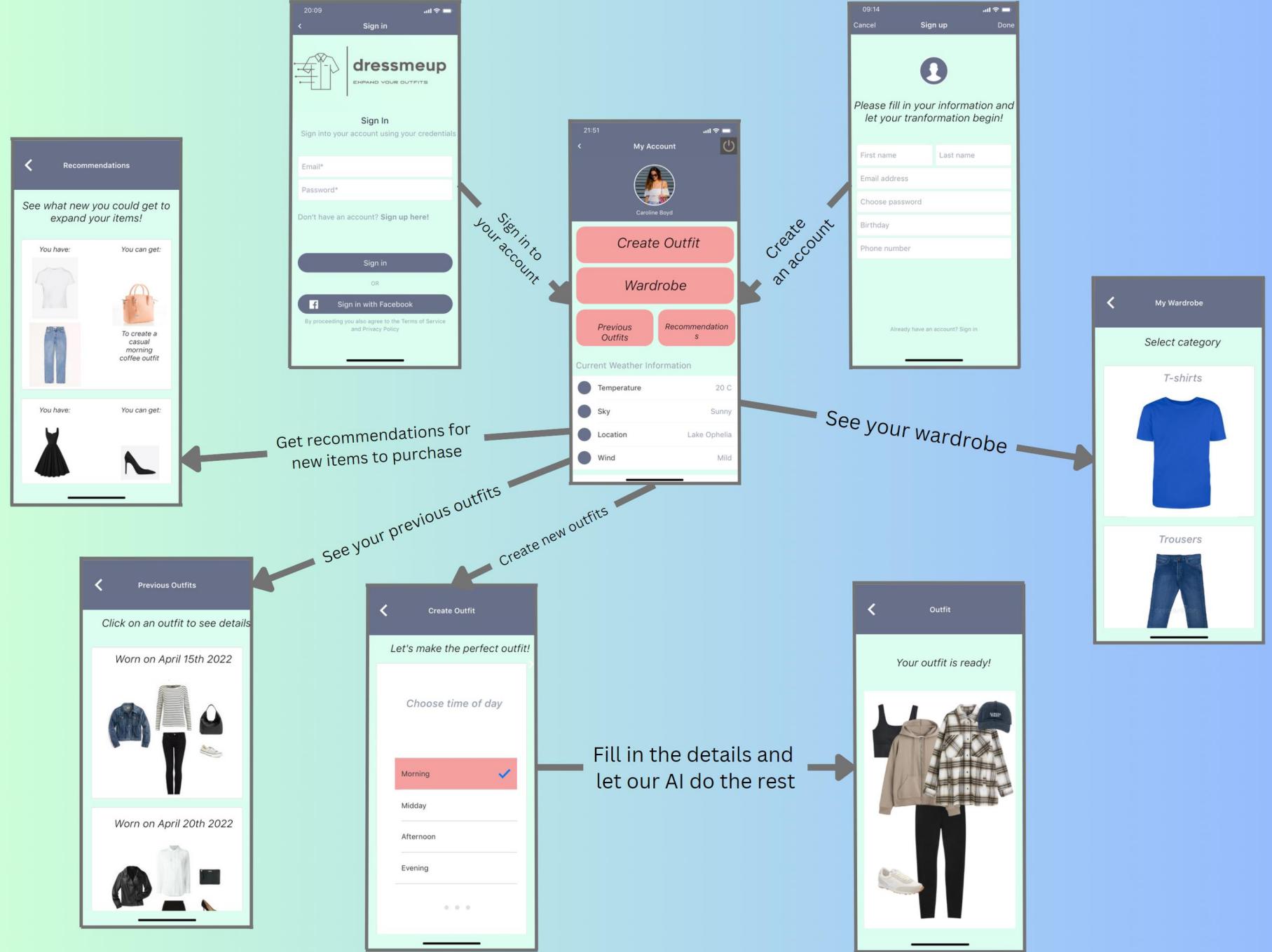
You can check any option of the sidebar checkboxes to operate the following functions:

1. View your dressmeup wardrobe clothes (View My Wardrobe option).
2. Insert new articles to your wardrobe, either by URL path (single-insert) or by local files (batch-insert) (Insert New Clothes option).
3. Update article's features values or delete articles in your dressmeup wardrobe (Update/Delete Clothes option).
4. Make combinations from the clothes in your dressmeup wardrobe or from an online article and the clothes in your wardrobe (Combine Clothes option).
5. Plan your daily occasions (Daily Planner option).
6. Find the percent of clothes usage in your wardrobe's combinations (Clothes Usage Statistics option).
7. Delete the whole dressmeup wardrobe (Delete My Wardrobe option).

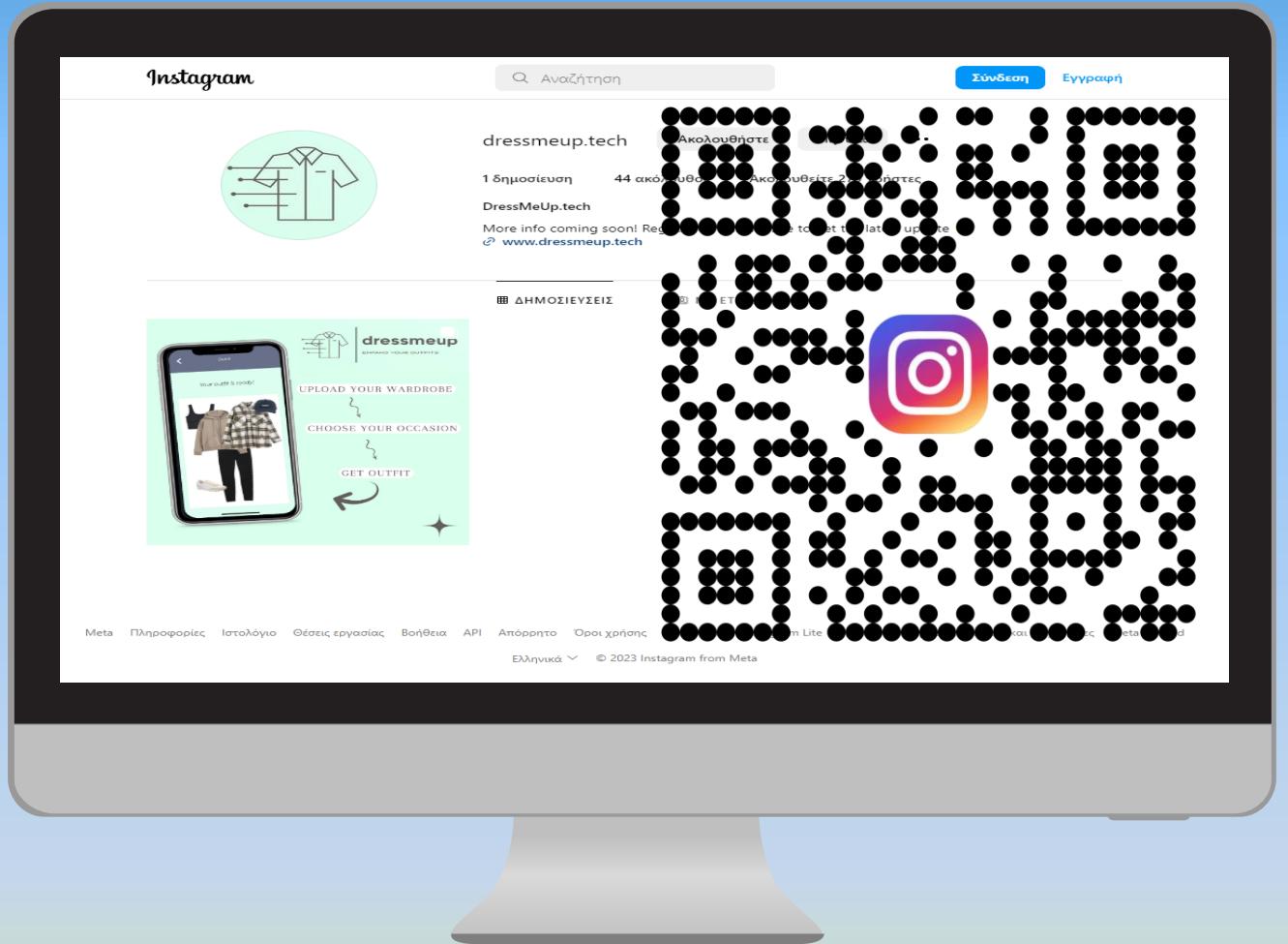
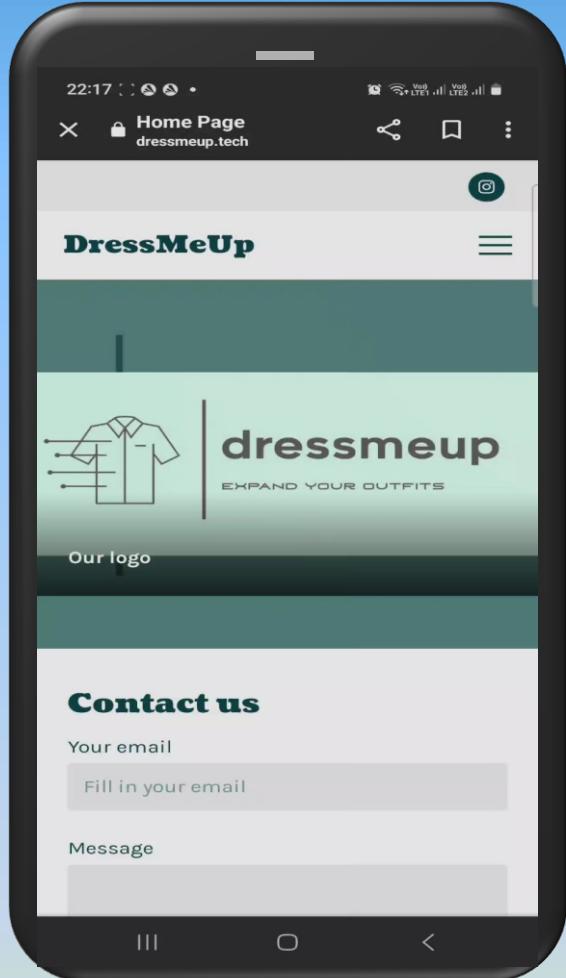
Made with Streamlit



# Mobile App Mockup



# Market Validation - Evidence

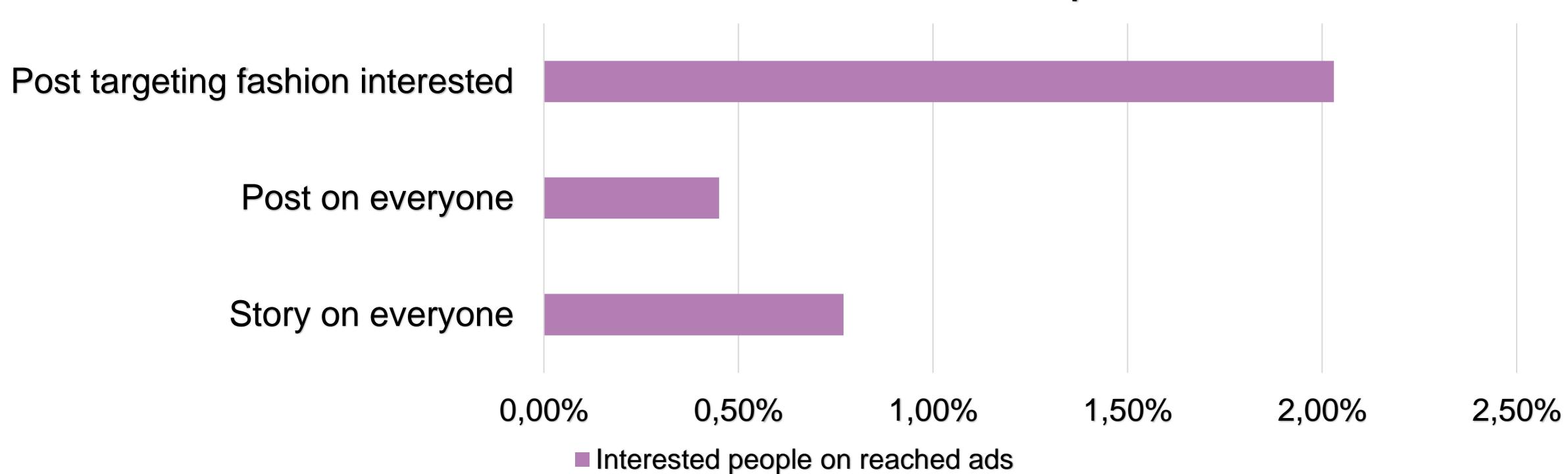


Source: <https://dressmeup.tech/>

Source: <https://www.instagram.com/dressmeup.tech/>

# Market Validation - Evidence

## Reached Ads Interested People



# Market Validation - Evidence

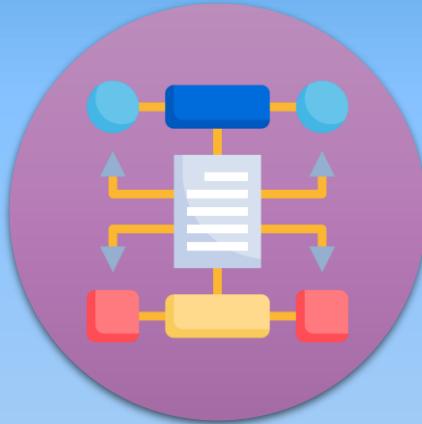


# Business Model

## Revenue Streams



# Future Work

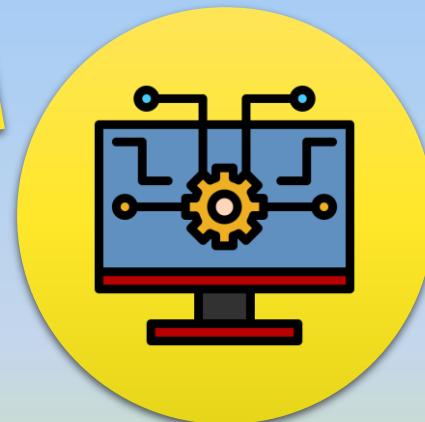


## Data & Algorithms

Collect/Create more/better Data  
Image Segmentation

## App Improvement

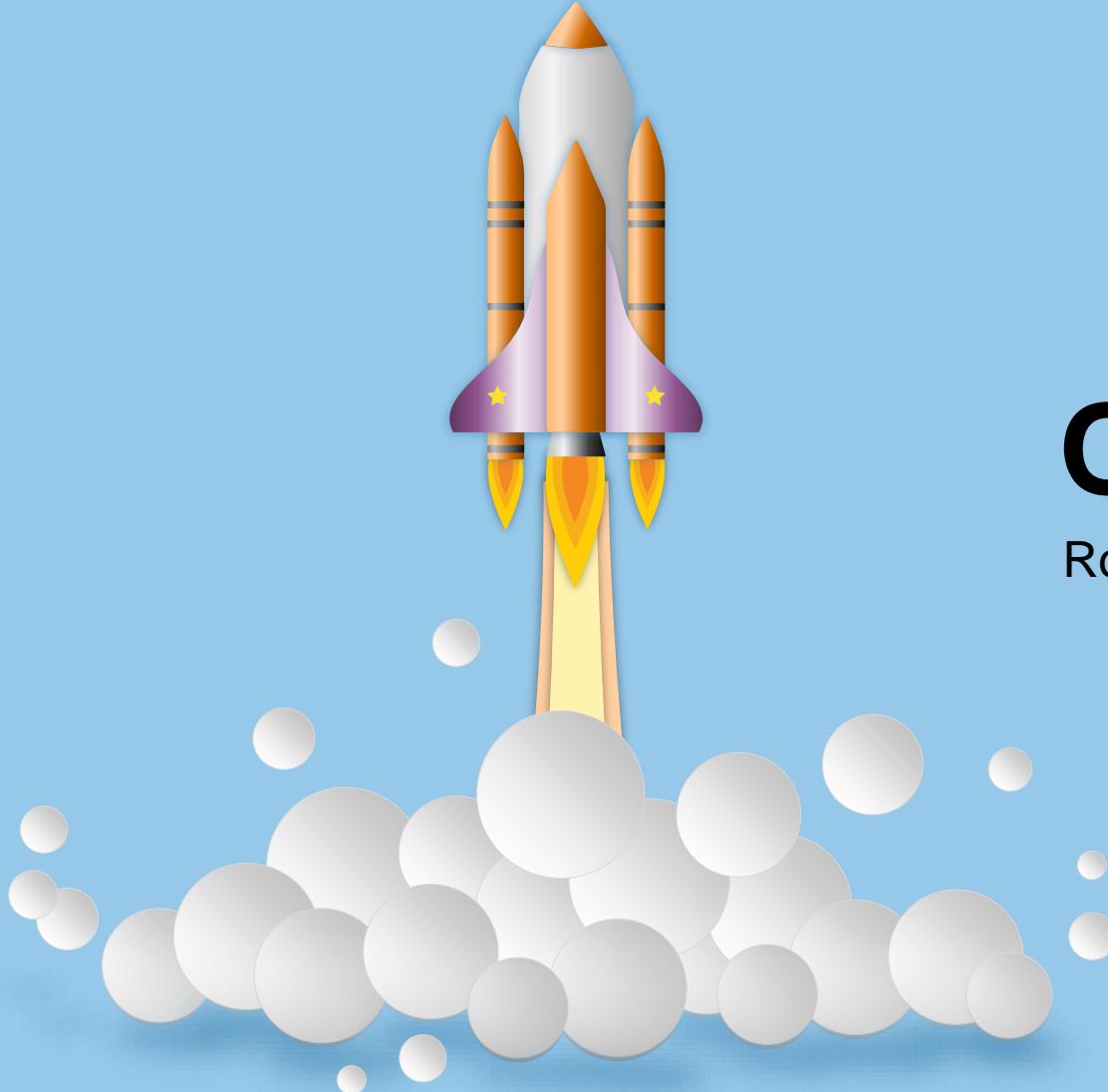
Plan Outfits (Weather Forecast)  
Sell & Buy Option  
Web App UI/UX Improvement



## App Development

Mobile Application  
API





# Our Team

## Roles & Time Plan

# Our Business Roles



**Kostas Vlassis**  
Chief Executive Officer



**Lefteris Souflas**  
Chief Technology Officer

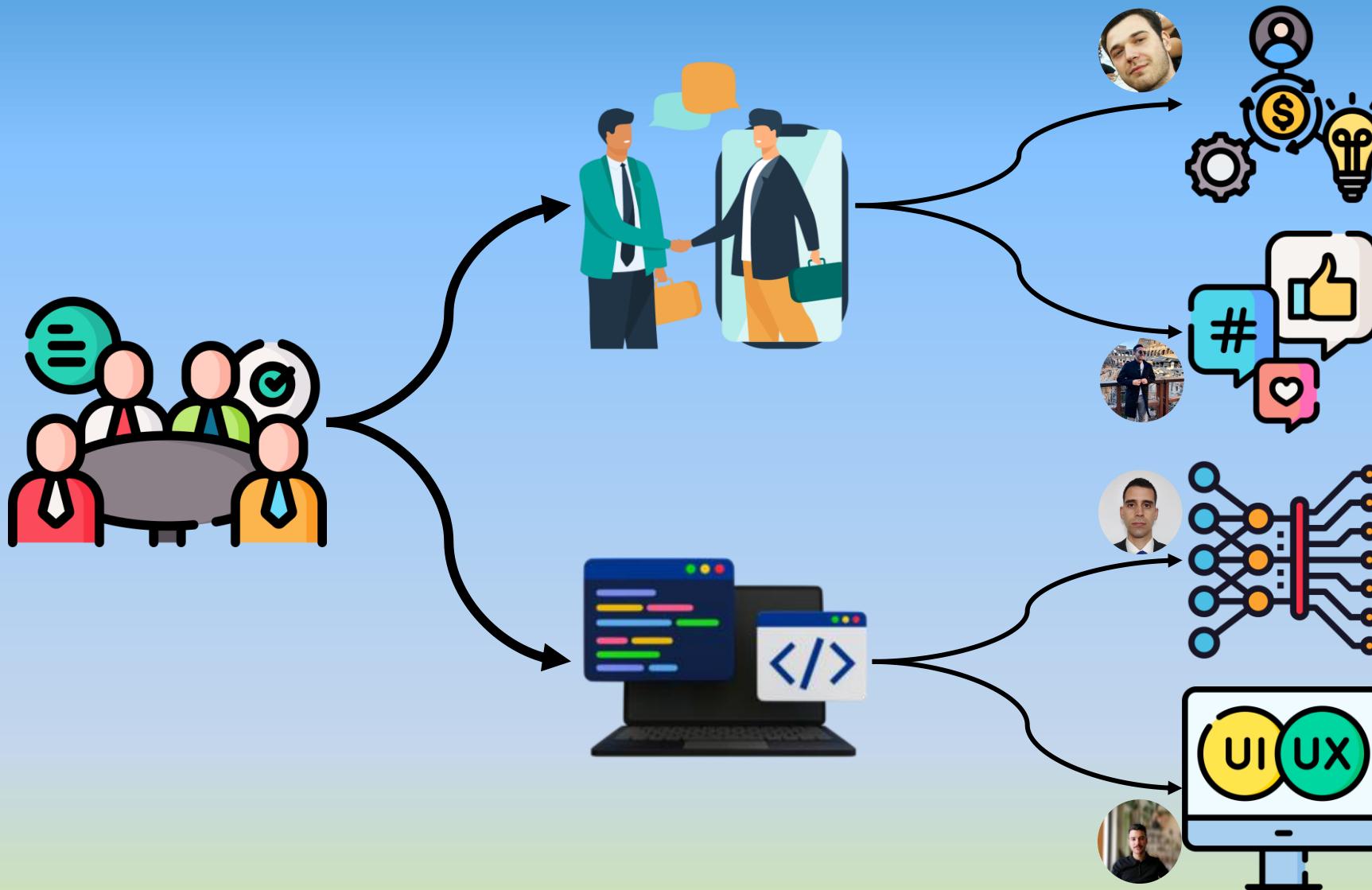


**Dimitris Tsapatsaris**  
Chief Sales Officer



**Manolis Sakellaris**  
Chief Financial Officer

# Our Project Roles



# Time Plan

Week	Days	Description
1	July 3 - July 9	Project Kick-off and Planning
2 - 3	July 10 - July 23	Business Planning
2 - 4	July 10 - July 30	Data Collection and Preprocessing
4 - 7	July 24 – August 20	Website Creation and Market Validation
5 - 7	July 31 – August 20	1 <sup>st</sup> AI Model Development
8 - 11	August 21 - September 17	Models Development (Cont.)
8 - 11	August 21 - September 17	Streamlit Application Development

**Week 1   Week 2   Week 3   Week 4   Week 5   Week 6   Week 7   Week 8   Week 9   Week 10   Week 11**

Project Kick-off/ Planning	Business Planning	Website Creation and Market Validation								
	Data Collection and Preprocessing		1 <sup>st</sup> AI Model Development		Streamlit Application Development					
						Models Development (Cont.)				

# Time Plan Diagram

# THANK YOU

