



FASHION

RECOMMENDER

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PROBLEM STATEMENT



Current fashion recommendation methods predominantly adopt a "**one shape fits all**" approach, overlooking the diversity in body shapes. This issue stems from a dataset bias favoring certain body types, typically thin and tall, limiting inclusivity. We are implementing "ViBE" (Visual Body-aware Embedding), a novel approach that recommends garments based on individual body shapes. ViBE learns from a diverse catalog displaying various body types, ensuring personalized and flattering clothing suggestions.

LITERATURE SURVEY

Visual Aware Body Embedding (ViBE)

Hourglass

STYLE TIP:
Go for soft silks that drape gently on your natural curves.

SUITABLE DRESS SILHOUETTE

Apple

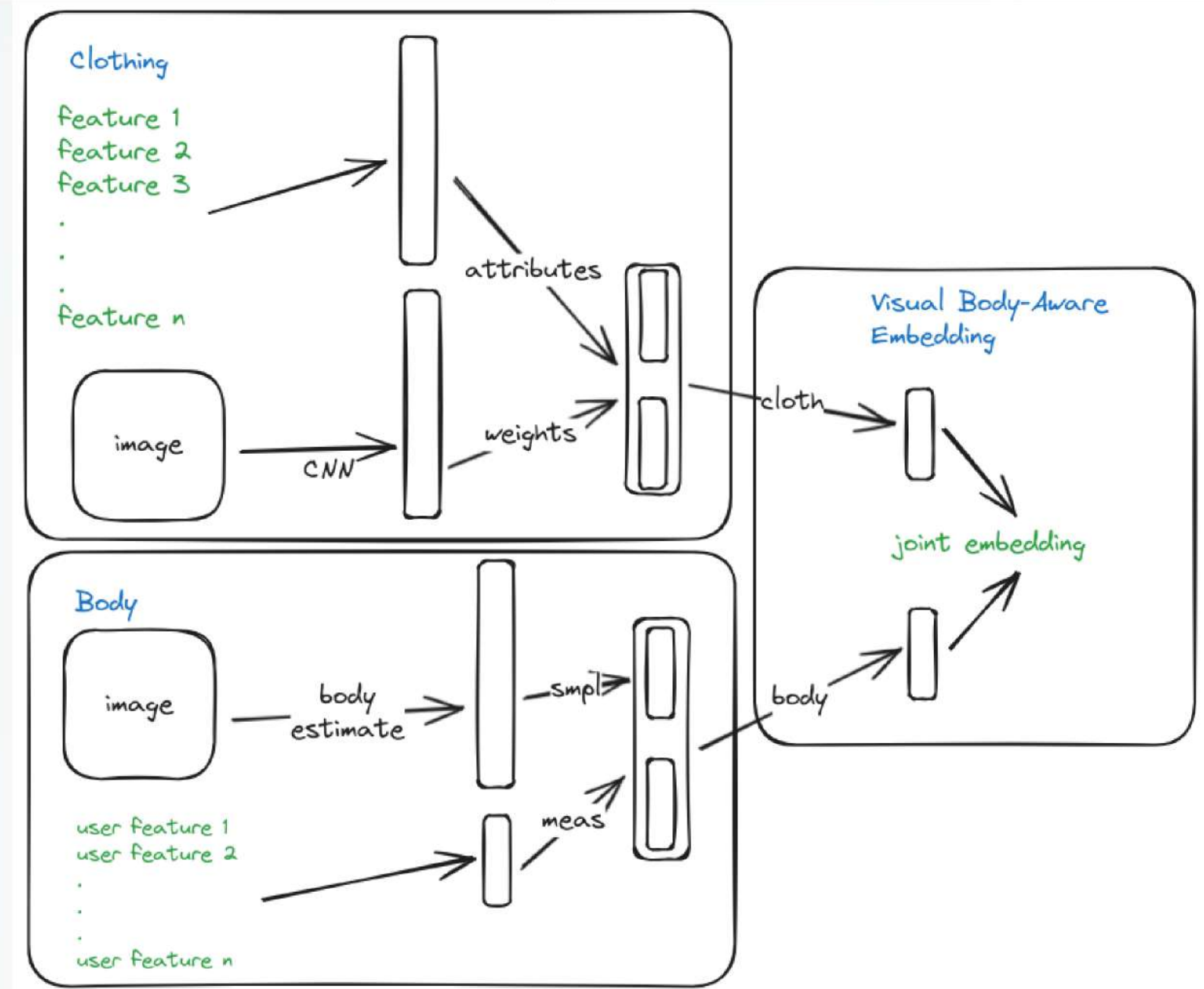
STYLE TIP:
Go for an A-line dress. Also, color blocking will draw attention away from your waist.

SUITABLE DRESS SILHOUETTE

Rectangle

STYLE TIP:
Aim to create more curves top and bottom. Try cut-out dresses and add a belt when possible to create a waistline.

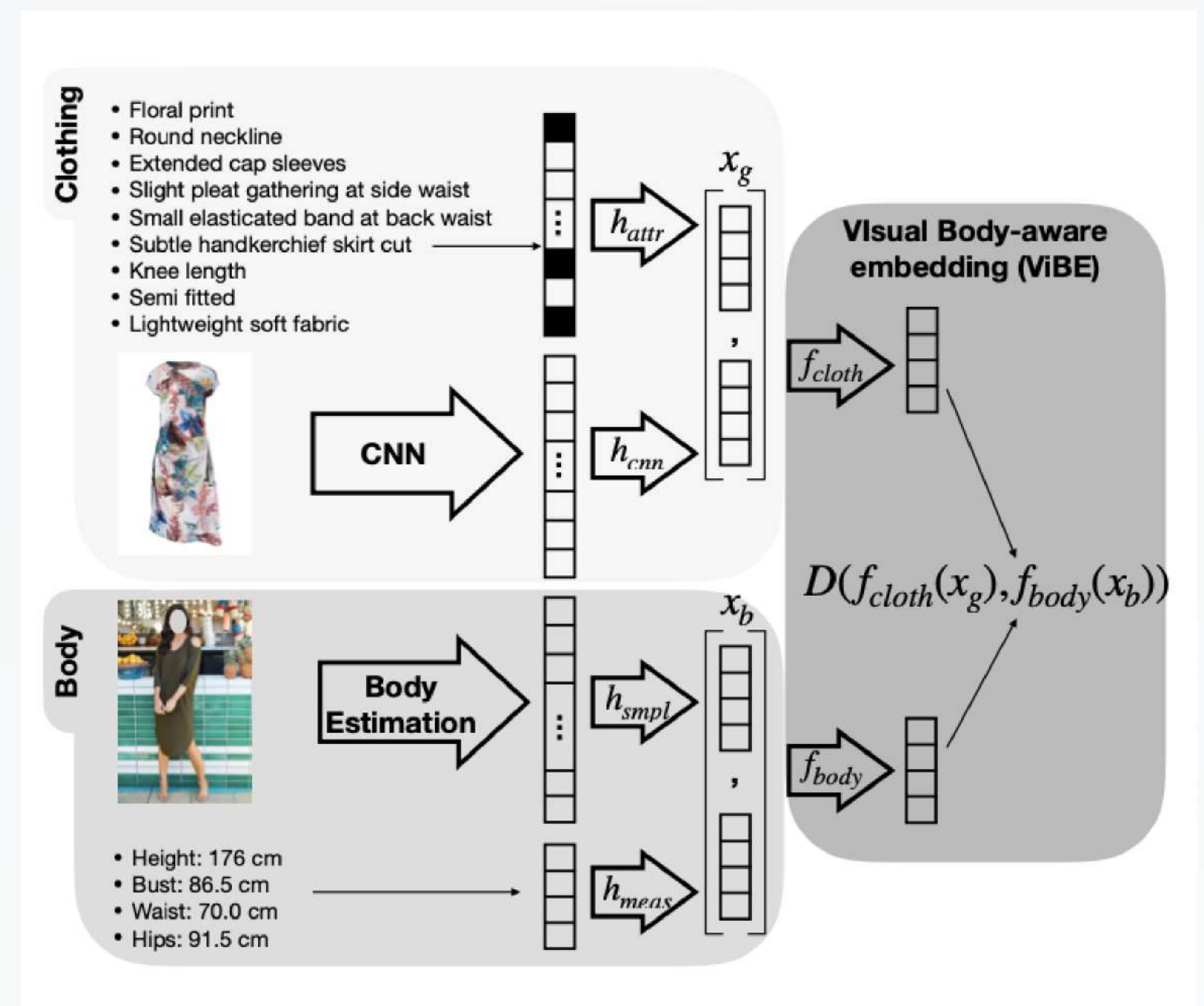
SUITABLE DRESS SILHOUETTE



LITERATURE SURVEY

Visual Aware Body Embedding (ViBE)

1. **Visual Feature Extraction:** Utilize pre-trained ResNet-50 on ImageNet to extract color, pattern, and silhouette information from clothing images.
2. **Attribute Vocabulary Development:** Create a clothing attribute vocabulary from catalog descriptions, emphasizing attributes like neckline and fabric.
3. **Model Measurements Standardization:** Collect and standardize fashion models' vital statistics (height, bust, waist, hips) into a 4D array.
4. **3D Body Modeling:** Employ a hybrid method combining HMD and SMPLify for creating and refining 3D meshes to represent female body shapes efficiently.



DATASET

Birdsnest

- Online shopping website
- Measurement unit - cm



Womens > C

WATCH VIDEO

Model image

Catalog image

Multiple models

- Model wears size 8
- Model wears size 10
- Model wears size 12
- Model wears size 16
- Model wears size 18

Colour: Navyblue ... View: Model wears size 10 ...

is wearing a size 10 in this style. 's body measurements are:

Her height is 175 cm. Bust 84 cm
Waist 66 cm
Hips 101 cm

Body measurement

Features Will this suit me? Sizing guide Delivery & returns

Feel and look fabulously gorgeous and sexy in the Nadine Dress from Moonlight bird.

The cut and design is figure flattering, designed to make the maximum of your natural curves. Soft smooth jersey glides over your body, skimming as it goes. The V neck, waist drape detail tapering through the ankles and 3/4 sleeves make it superbly flattering for most body shapes. Add some heels yours! Love,

Attributes

- V neck
- Twist tie waist detail
- 3/4 sleeves
- Front split
- Tapering through hips and ankles
- Smooth stretch jersey fabric feel
- Shoulder to hem approx 144cm (Size 12)
- 92% polyester 8% elastane
- Cold hand wash
- Designed in Australia
- Made in Australia

Not sure of your size? Please check the sizing guide tab.

Maxi Dresses like this

Waistline dress Designed in Australia

Draping V neck Semi fitted Stretch

Birdsnest website's - snapshots and the data available

PRE-PROCESSING

prepare, refine, clean, structure, and ready for analysis

**Standardising
columns names
and
Understanding
Data**

STEP 1

**Converting
columns to
standard unit
metrics**

STEP 2

Parsing JSON

STEP 3



ML METHODOLOGY

Body Types slightly imbalanced, Clothing Types highly imbalanced



COEVOLUTIONAL
NEURAL
NETWORK



SKINNED MULTI-
PERSON LINEAR
MODEL

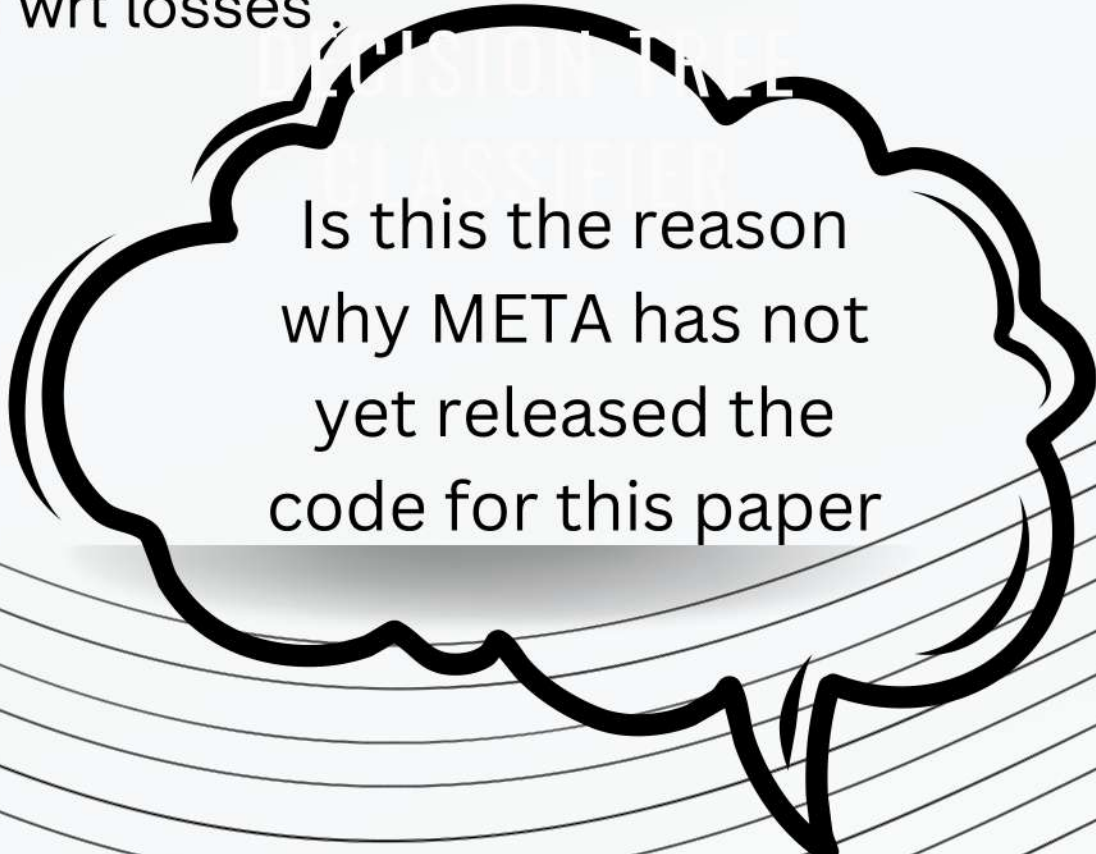


VOCABULARY
GENERATION

OOP'S PIPELINE "FATT GAI.."

so when we were trying to implement the paper "**ViBE: Dressing for Diverse Body Shapes**" we found out that one of the model used "**SMPL**" uses a library called "**opendr**" which has a a bug and would not get installed

SMPL provides the body features, and would create a mesh which would get projected on the 2d image and then it would do HMD and HMR to the to decompose and regenerate mesh wrt losses .



Is this the reason why META has not yet released the code for this paper

BACHA0000 “APNI JAAN”

so we started searching for other alternatives

SMPL provides the body features, and would create a mesh which would get projected on the 2d image and then it would do HMD and HMR to the to decompose and regenerate mesh wrt losses .

DECISION TREE
CLASSIFIER

BINARY ATTRIBUTES GENERATION

Read multiple attribute files for clothing items

Remove punctuations, stop words etc.

Tokenize words and generate unique vocabulary

Create binary array describing if certain attribute is present

01

**LITERATURE
REVIEW**

Started with "Magic Closet" from NUS, Singapore and "Fashion is Taking Shape" from Max Planck Institute, Germany

02

**DATASET
HUNTING**

Currently usable datasets are from ModCloth's public dataset and RentTheRunWay's public dataset

03

**PRE-
PROCESSING**

Dealing with a lot of NaN values, interpolating some columns, and final feature selection

04

**MODEL
SELECTION**

Further improvements and application of Deep NN to map with real products based on similarity and predict fit

**THANKS FOR
WATCHING**

