FASHION RECOMMENDER

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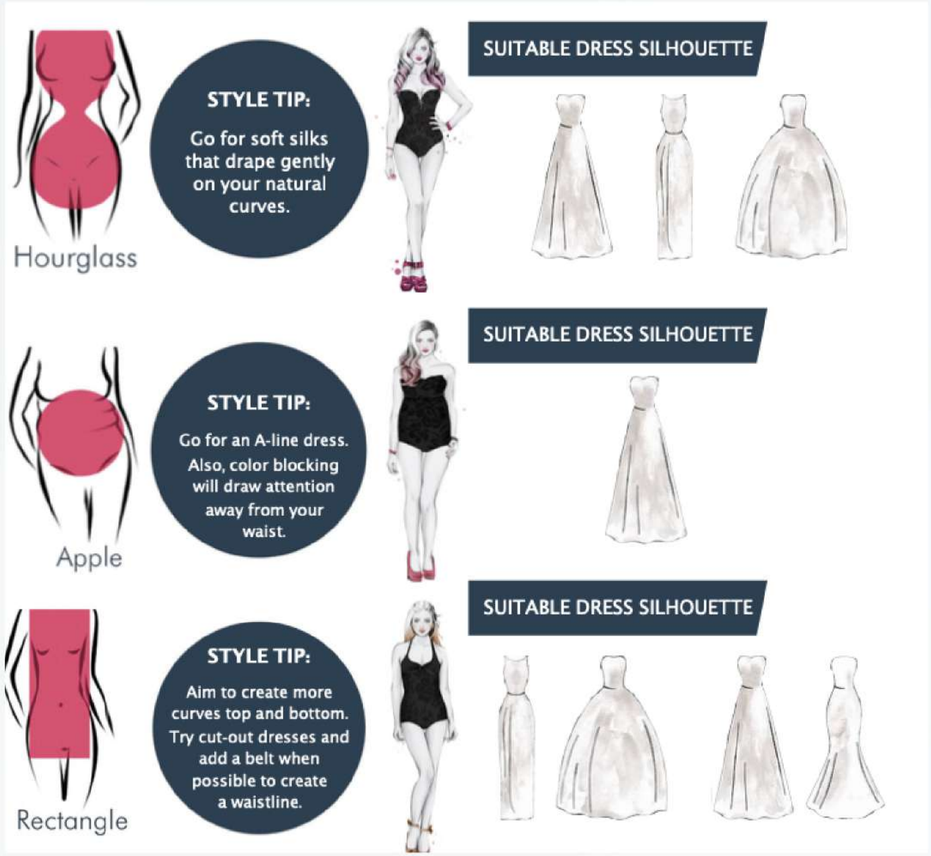
CONTENT

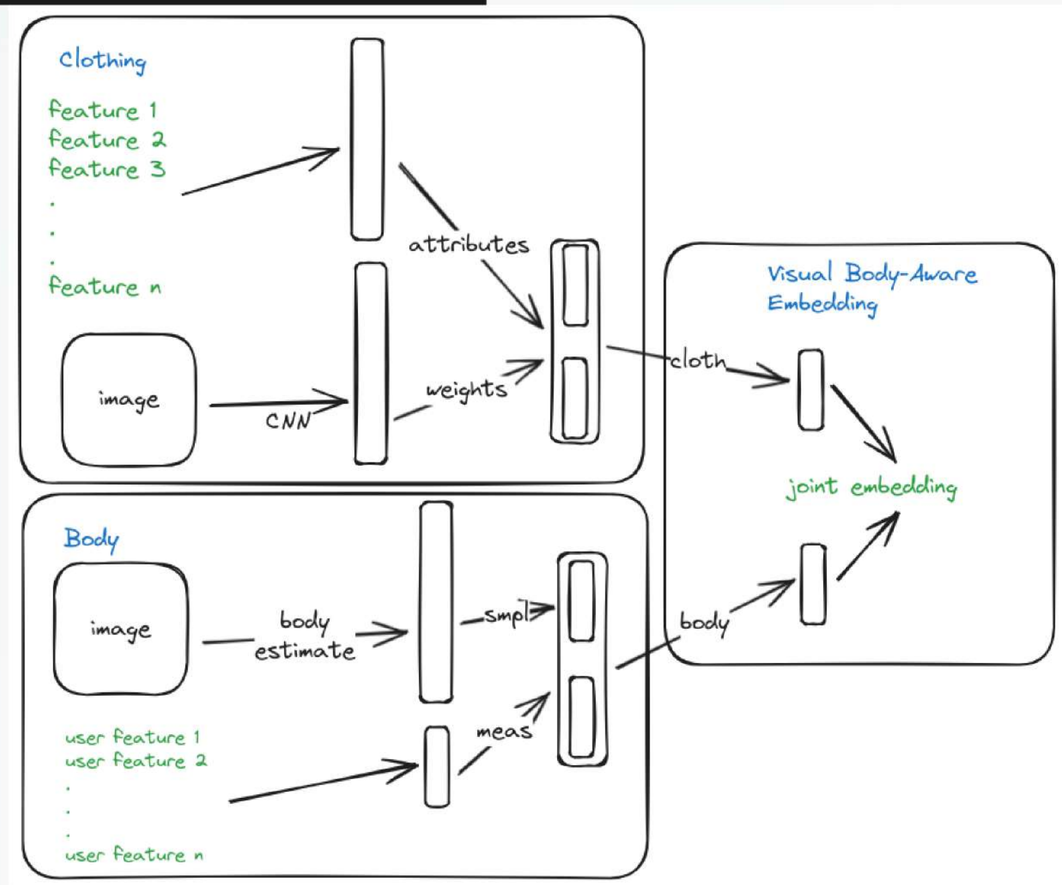
PROBLEM STATEMENT

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)

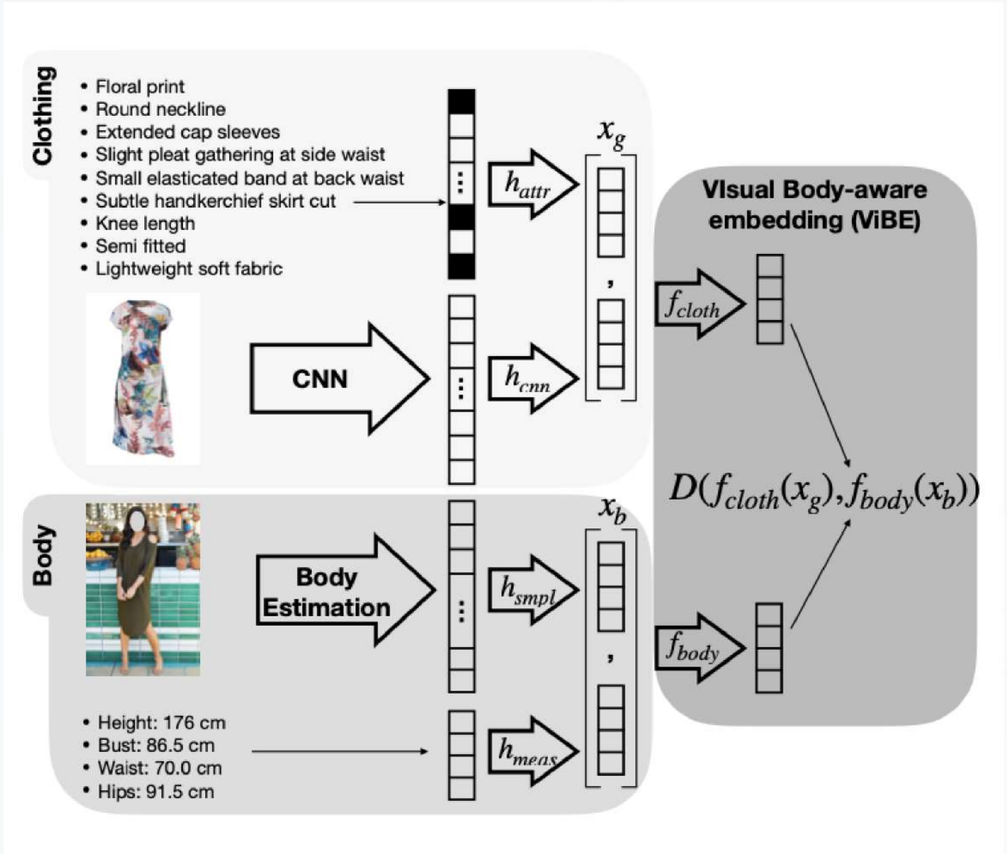




LITERATURE SURVEY

Visual Aware Body Embedding (ViBE)

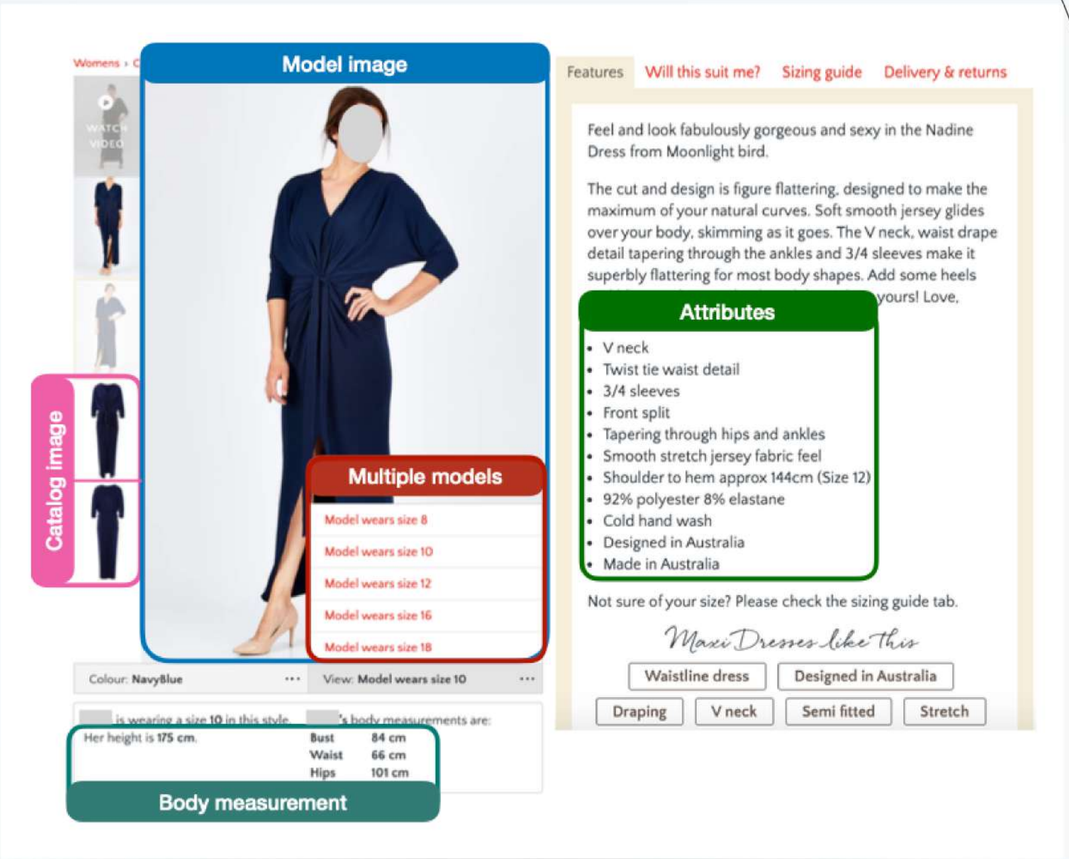
1. **Visual Feature Extraction**: Utilize pre-trained ResNet-50 on ImageNet to extract color, pattern, and silhouette information from clothing images.
2. **Attribute Vocabulary Development**: Create a clothing attribute vocabulary from catalog descriptions, emphasizing attributes like neckline and fabric.
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



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

COVOLUTIONAL NURAL NETWORK

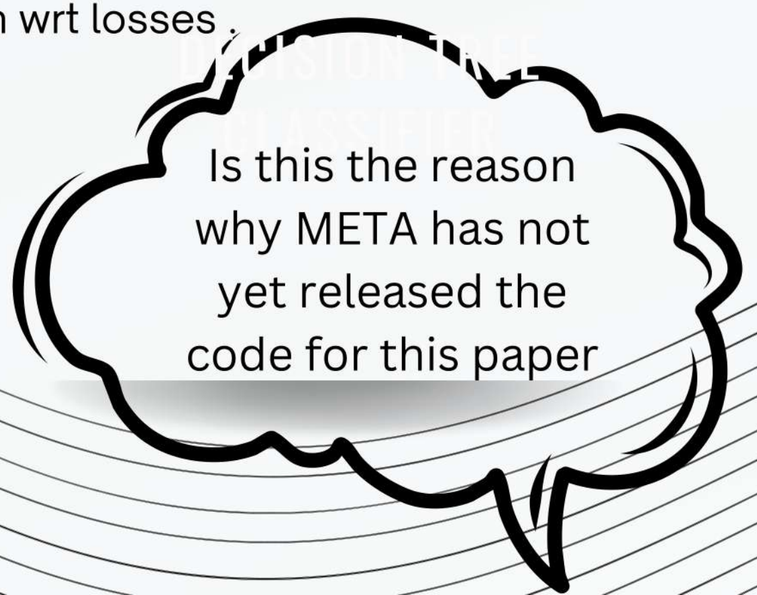
SKINNED MULTI-PERSON LINEAR MODEL

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 .



BACHAOOOO “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