BVRIT HYDERABAD
college of engineering for women

Department of
INFORMATION TECHNOLOGY

FASHION RECOGNITION

Under guidance of Mr.Ganapathi
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PROBLEM STATEMENT

Develop a deep learning model for fashion image classification. The model will take fashion item images as input and categorize them into various apparels and footwear categories, such as shirts, pants, dresses, and shoes, based on the provided dataset.

The goal is to achieve high accuracy in classifying fashion items. The trained model and label encoder will be provided as deliverables for fashion-related applications.

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MODULES AND PACKAGES

- **numpy** - Python library for numerical and array operations.
- **pandas** - Python library employed for data manipulation and analysis.
- **os** - Python module to interact with operating system.
- **tensorflow** - Used as deep learning framework to build train and deploy machine learning models, particularly for image classification tasks.
- **keras** - Serves as an integral part of TensorFlow, providing a high-level neural networks API for streamlined model building and training in image classification tasks.

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- **Streamlit** - A Python library or framework utilized to build a user-friendly web application for displaying information, text, and interactive elements, allowing users to interact with the machine learning model and its predicti

- **matplotlib** - Matplotlib is a popular Python library for creating static, animated, or interactive visualizations and plots for data analysis and presentation.

- **sklearn** - A machine learning library for Python that provides simple and efficient tools for data analysis and modeling, including classification, regression, clustering, and more.

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MODEL SELECTED

CNN :

CNNs are a type of deep learning model designed for image-related tasks. They automatically learn and recognize patterns in images using convolutional layers, pooling layers, and fully connected layers. They've had a huge impact on image classification, object detection, and more. CNNs use filters to extract features, reducing the need for manual feature engineering.

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CONTRIBUTION OF TEAM

Roll Number	***Name***	***Contribution***
21wh1a1217	Sneha Reddy.M	GUI, Research, Presentations
21wh1a1218	P.L.Varshita	GUI, GUI interface, Data preprocessing
21wh1a1219	M.Sree Akshitha	Data augmentation, normalization,Model training and testing
21wh1a1220	S.Akshaya	GUI, Research
21wh1a1222	Sheri Vaishnavi	Model training, Integrating with GUI, Deploying

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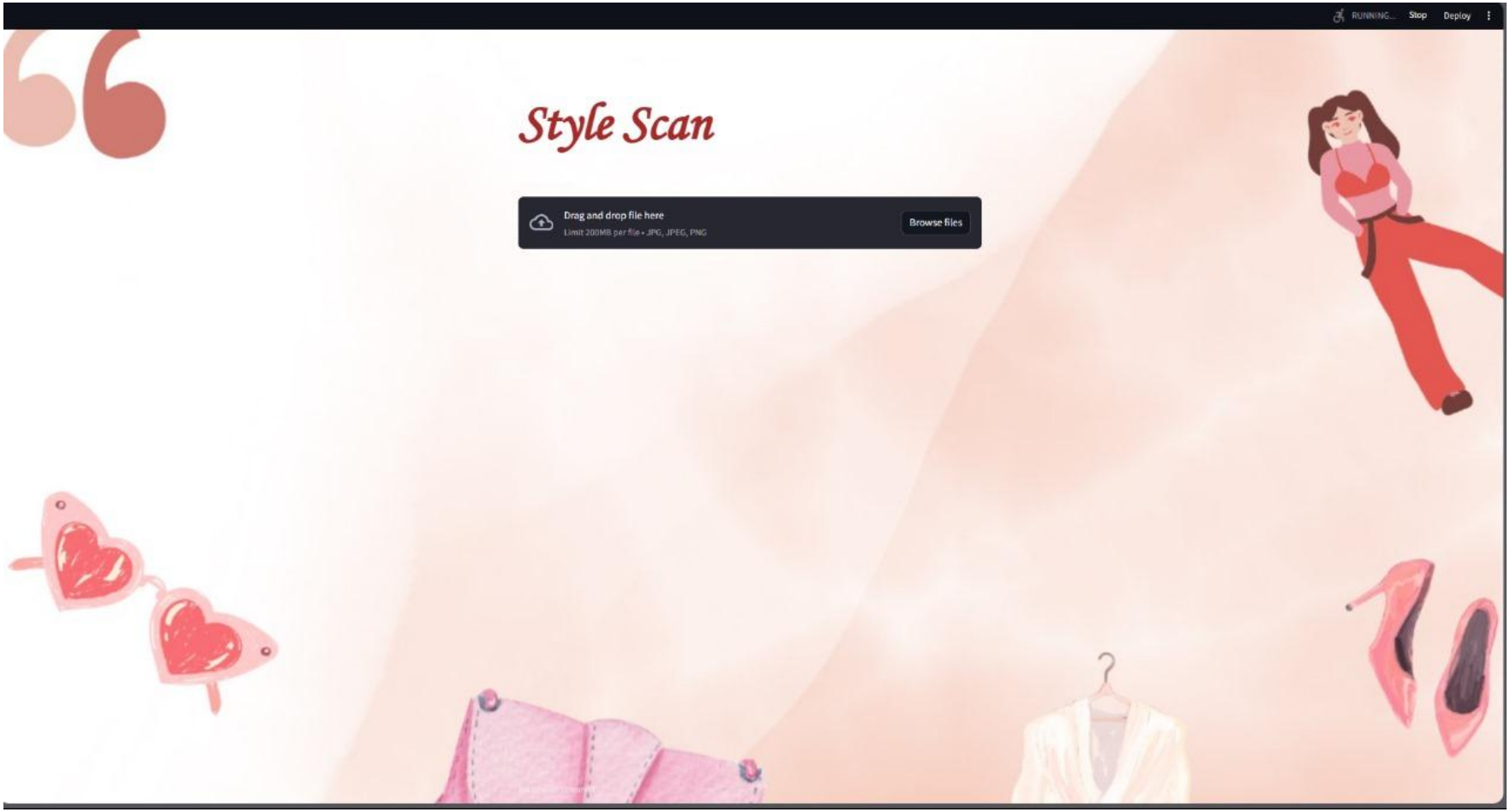
EXECUTION



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Deploy

Style Scan

Drag and drop file here
Limit 200MB per file • JPG, JPEG, PNG
Browse files

Predicted Fashion Category: Tops

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References

- https://machinelearningmastery.com/how-to-develop-a-cnn-from-scratch-for-fashion-mnist-clothing-classification/
- https://www.kaggle.com/code/paramaggarwal/fashion-product-images-classifier
- https://github.com/mj703/Fashion-Recommendation-System
- https://github.com/aakashjhawar/dress-pattern-recognition-using-CNN/blob/master/image_similarity.ipynb

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THANK YOU