

Fashion Classifier

AI-POWERED FASHION INTELLIGENCE

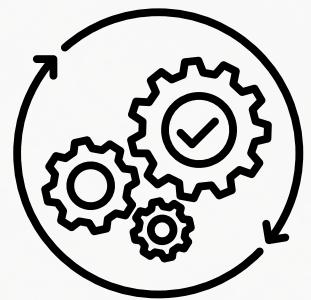
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APPLIED AI BOOTCAMP -
JUL/25

Problem

- 1 Describing fashion items manually is time-consuming and unscalable.
- 2 Inconsistent tone and missing keywords hurt SEO and product discovery.
- 3 The result: slower launches, higher costs, and weaker customer engagement.

Solution



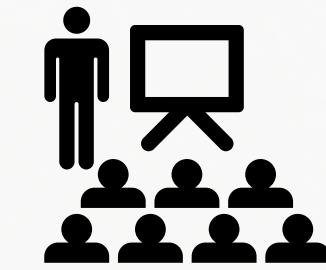
AI-Powered Automation

Instantly generate accurate product descriptions using state-of-the-art AI models.



Data-Enriched Insights

Leverage your existing catalog to create richer, more relevant, and searchable content.



Brand-Consistent at Scale

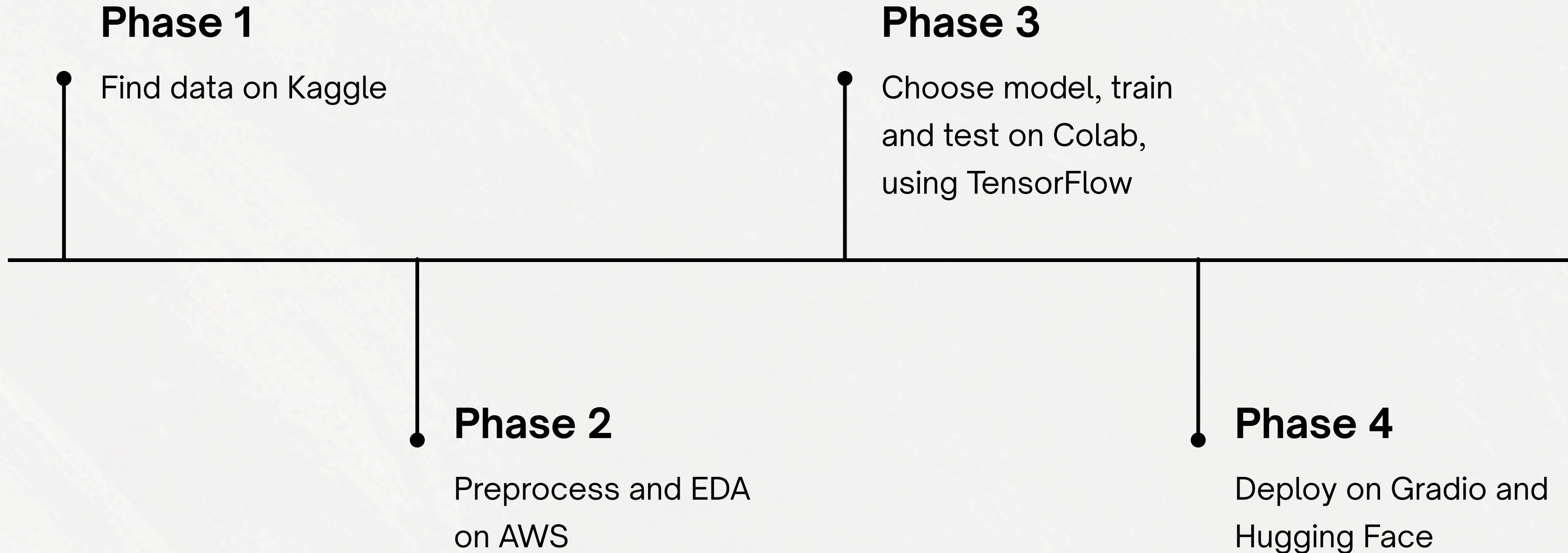
Ensure every description matches your tone and style — across thousands of SKUs.

— How?

Using a **Computer Vision** model that is able to identify item's **categories** and **attributes** through **pictures**, delivering them in a list of highlights



Roadmap



Our Approach

From data to definition — fast, accurate, and scalable.

Data Collection / Processing

- Our prototype was trained on the DeepFashion dataset (Kaggle).
- After cleaning, we worked with 16 categories and 18 attributes.
- We identified mislabeling and imbalance issues, highlighting the need for improved dataset curation in future iterations.

AI Training / Evaluating

- Using transfer learning with a multi-task EfficientNetB0, we trained the model to recognize both categories and attributes.
- This setup accelerated learning and improved accuracy despite imperfect data.
- Early results validate the feasibility of our AI-driven approach.

Results & Learnings

- The prototype managed to classify clothing items into categories and attributes.
- Outputs are clear, structured, and easily adaptable for e-commerce applications.
- Results validate our approach and highlight opportunities for improvement with cleaner, richer data.

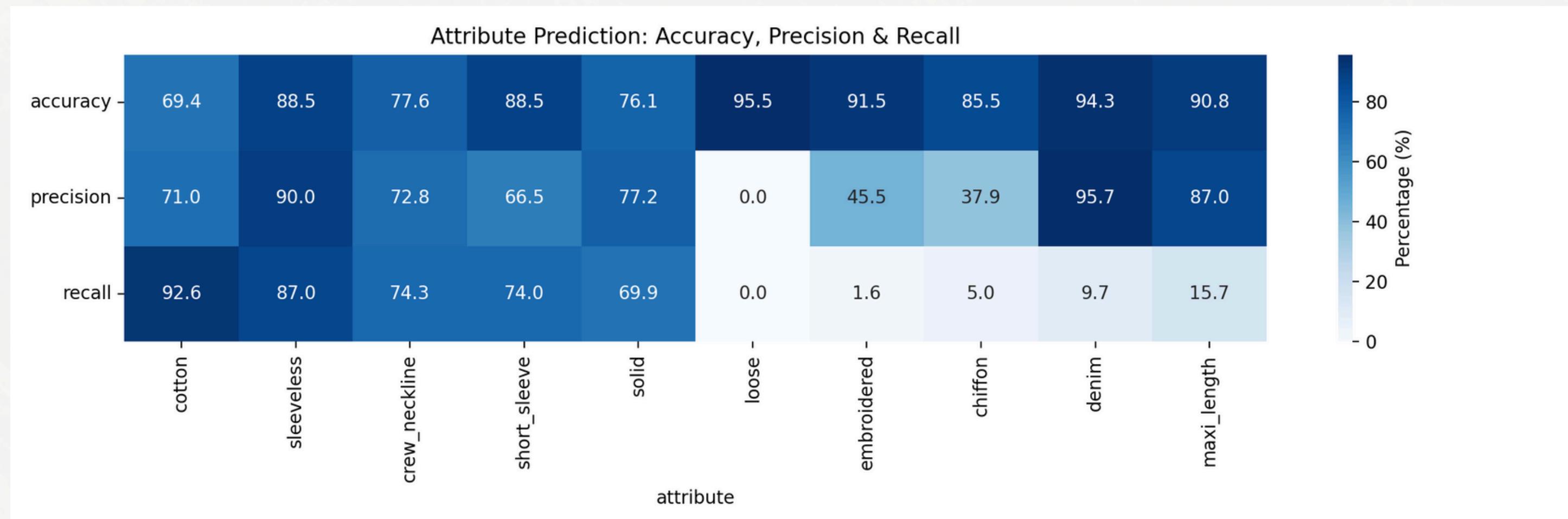
Give It a Try

See how our model works in real time through our Gradio demo.

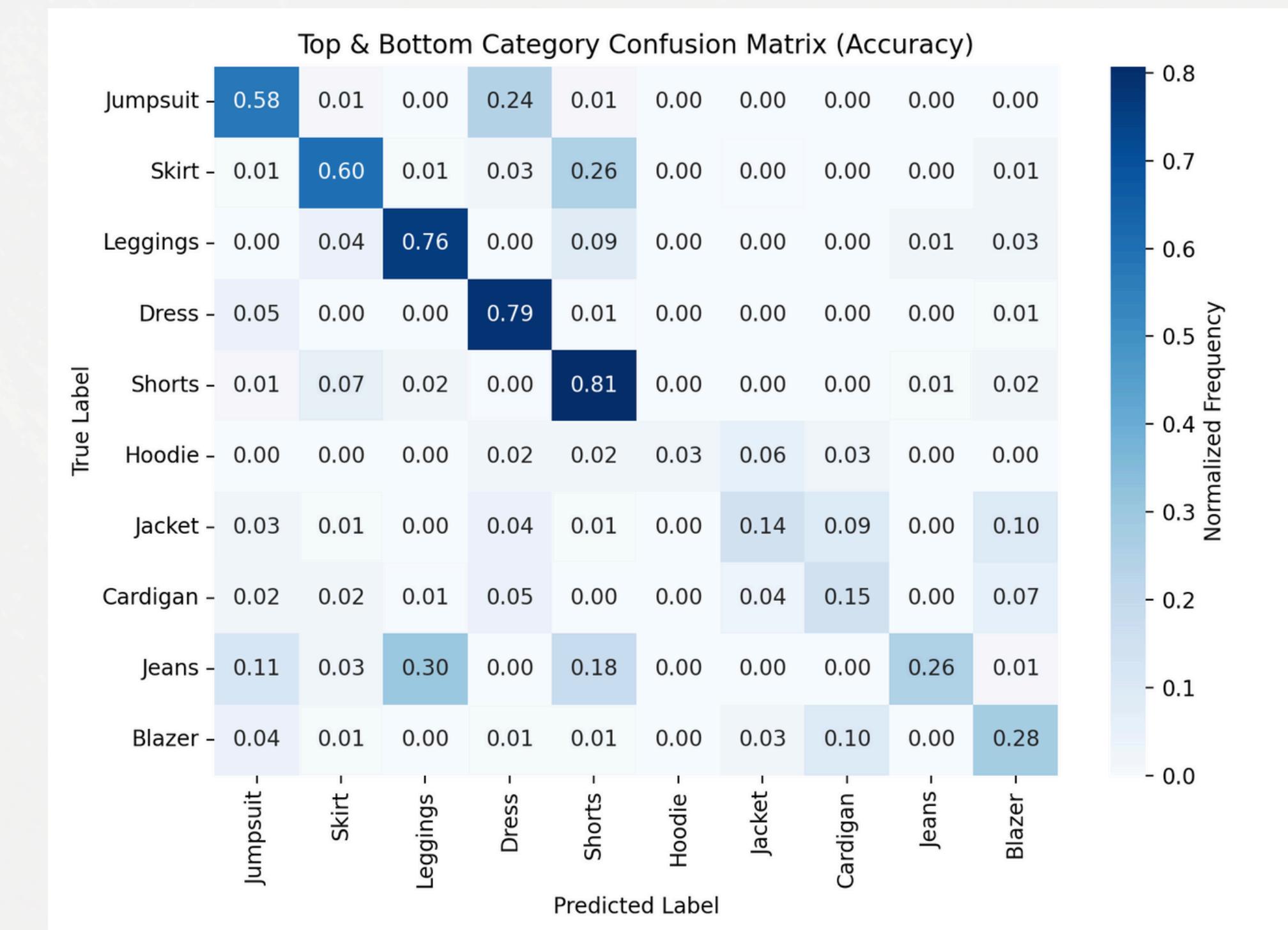
Upload any image [here](#), and watch the magic happen!



Evaluation Metrics & Visualizations

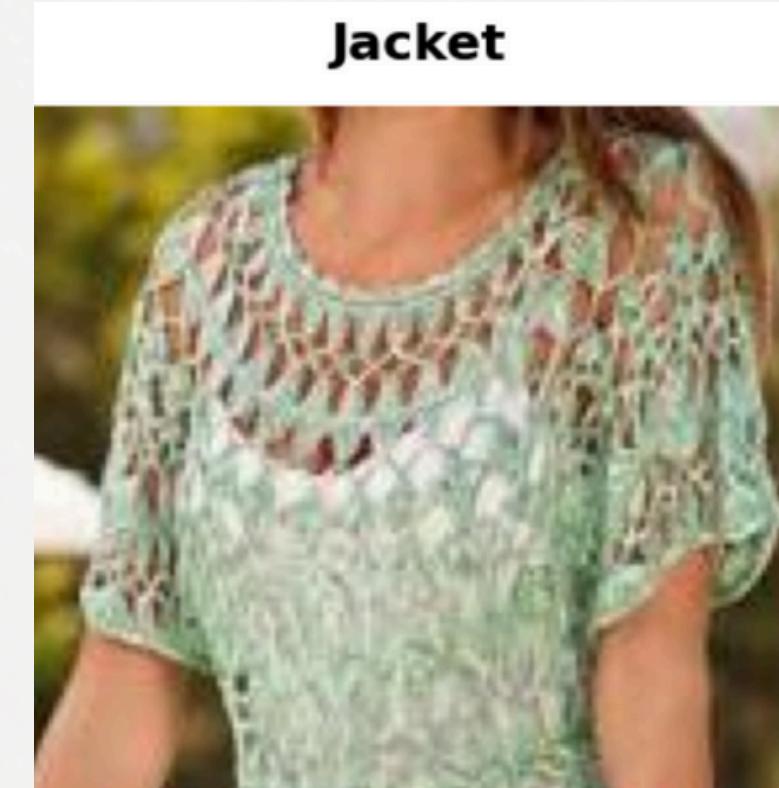
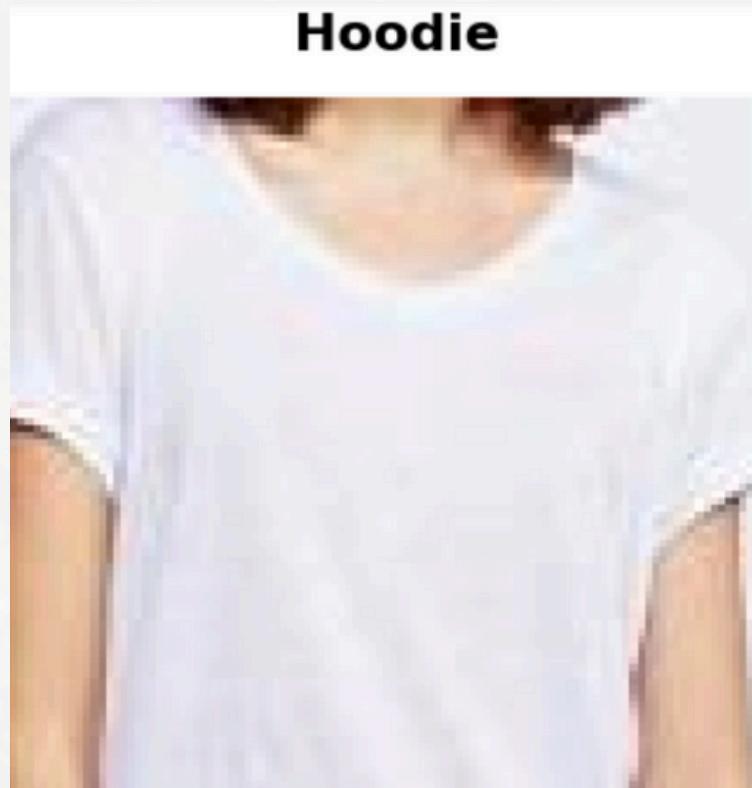


Evaluation Metrics & Visualizations



Model Confusions in Action

Representative samples of model confusion on test data



Wrapping Up

What Went Well

Strong model performance

Shows consistent and promising results across categories and attributes.

Excellent attribute predictions

High precision and recall for key visual features.

Scalable solution

Architecture ready for larger datasets and real-world integration.

Next Steps

Improve data reliability

Collect more diverse and representative samples.

Address class imbalance

Refine training strategies for under-represented attributes.

Fine-tune for higher accuracy

Iterate on hyperparameters, threshold calibration and refine architecture.

Thank You

HAVE ANY QUESTIONS?

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