
MANGO
We are Mango. We create fashion.

MANGO

12 NOVIEMBRE 2023

Fashion Compatibility Challenge

UPC Datathon 2023

Understanding Fashion Compatibility

¿What is Fashion Compatibility?

Fashion Compatibility focuses on identifying how well different fashion products match together as an outfit.

In other words, Fashion Compatibility is about how “to determine whether the fashion items in an outfit are compatible or not” (Zhou, Zhang, Li, Ma, & Xu, 2023)[1].

Beyond Aesthetics

Fashion matching is not straightforward and often goes beyond mere product metadata. It involves understanding the complementary nature of different fashion products.

It's not just about colors or styles, but also materials, types, and overall appeal.

1. Zhou, D., Zhang, H., Li, Q., Ma, J., & Xu, X. (2023). COutfitGAN: Learning to Synthesize Compatible Outfits Supervised by Silhouette Masks and Fashion Styles. IEEE Transactions on Multimedia, 25, 4986–5001. https://doi.org/10.1109/TMM.2022.3185894

The ability to recommend automatically curated fashion outfits represents a pivotal element in elevating the customer experience

Outfit Recommendation

Applications

ONLINE

- PERSONALIZED WEB EXPERIENCE
- ONLINE FASHION ASSISTANT
- PERSONALIZED MAILING
- B2B PLATFORM OUTFIT SUGGESTIONS

OFFLINE

- STYLING COORDINATION
- STORE PRODUCT PRESENTATION
- IMAGE PHOTO-SHOOTING
- PERSONALIZED IN-STORE EXPERIENCE

The dataset is composed both of tabular and image data – making use of the images composing an outfit is critical for the challenge

Outfit images

Products that compose an outfit.

Real outfits curated by MANGO's stylists and fashion experts are part of the dataset.

Target

Targeted audience (e.g. Woman, Unisex, etc.)

Product taxonomy

Information such as product families for each product

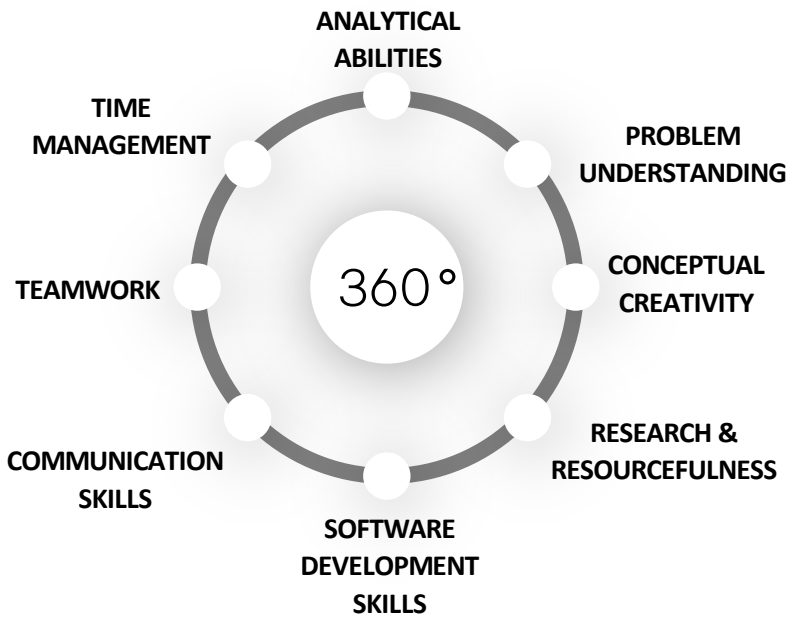
Color information

Data related to color attributes of each product

Exhibit proficiency in navigating a complex data science challenge while adhering to strict deadlines and maintaining performance under a high-pressure scenario

Embrace the intersection of Data Science and Fashion

A HOLISTIC CHALLENGE TO TEST ESSENTIAL DATA SCIENCE SKILLS



Evaluation Criteria

ELEVATOR-PITCH PRESENTATION (10 Min)

- Develop a model to effectively predict matching products based on tabular and/or visual features
- Present your proof-of-concept with at least 5 newly created outfits to a panel of multidisciplinary judges
- Exhibit creativity in how you tackle the complexities of the fashion compatibility challenge
- Take into consideration real-world applicability
- Communication skills and presentation skills will be a key aspect in the evaluation

GITHUB'S CODE REPOSITORY

- Showcase your ability to develop together as a team using version control and branching strategies
- Evaluation of code quality and reproducibility
- Quality and completeness of documentation

To start working on the challenge, follow these steps

Repository

data-science-mango/datathon-2023-fashion-compatibility

Let's start

NEXT STEPS

1. Access the Github repository
2. Fork the repository
3. Clone the repository
4. Read the challenge documentation
5. Download the dataset & images as .zip file
6. Read the dataset documentation
7. Happy coding!

TIPS & INSIGHTS

1. Allocate enough time to prepare the presentation & train your elevator-pitch
2. Apply a *divide & conquer* strategy – define clear roles and necessary milestones to succeed
3. Make sure to research potential solutions
4. Consider using visual tools such as *Streamlit* to showcase your solution
5. There are useful open-source models that may help in the challenge (e.g. FashionCLIP[1])
6. If you wish, you can enrich the dataset with external data

1. Chia, P. J., Attanasio, G., Bianchi, F., Terragni, S., Magalhães, A. R., Goncalves, D., Greco, C., & Tagliabue, J. (2022). Contrastive language and vision learning of general fashion concepts. Scientific Reports, 12(1), Article 1. https://doi.org/10.1038/s41598-022-23052-9

