

La Vipère

Custom clothes for Everyone

Nesrine Zarrouki, 07/03/2024



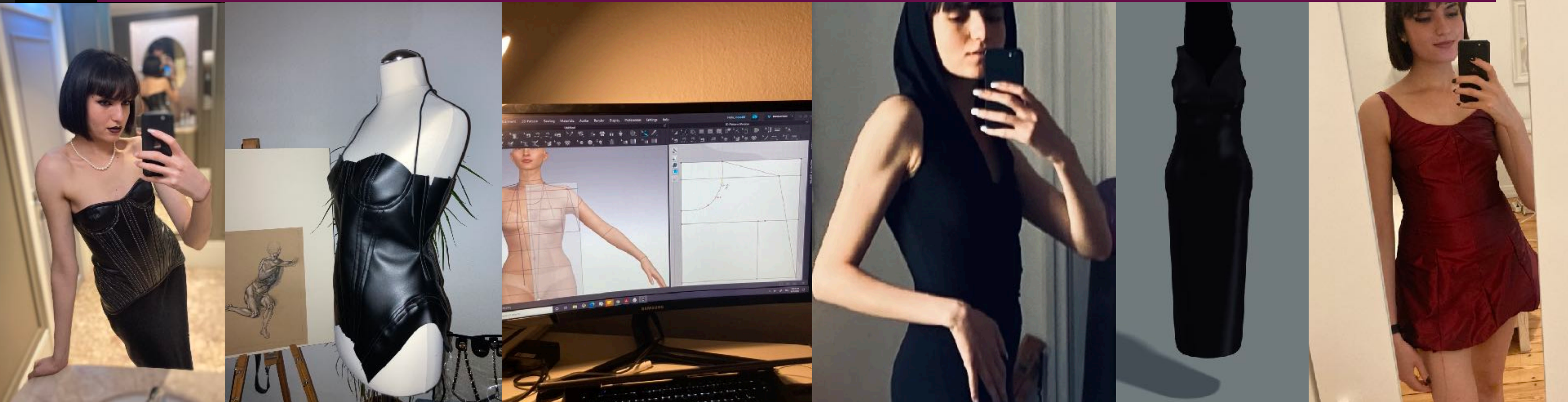
Personal Introduction

- Nesrine Zarrouki 🇹🇷
- Work: Lead Data Science and MLOps
- Study in Technical Universities 🇩🇪
 - M.Sc. Mathematics.
 - B.Sc. Computer Engineering
- Passion: Visual Art and Design.

Story Time

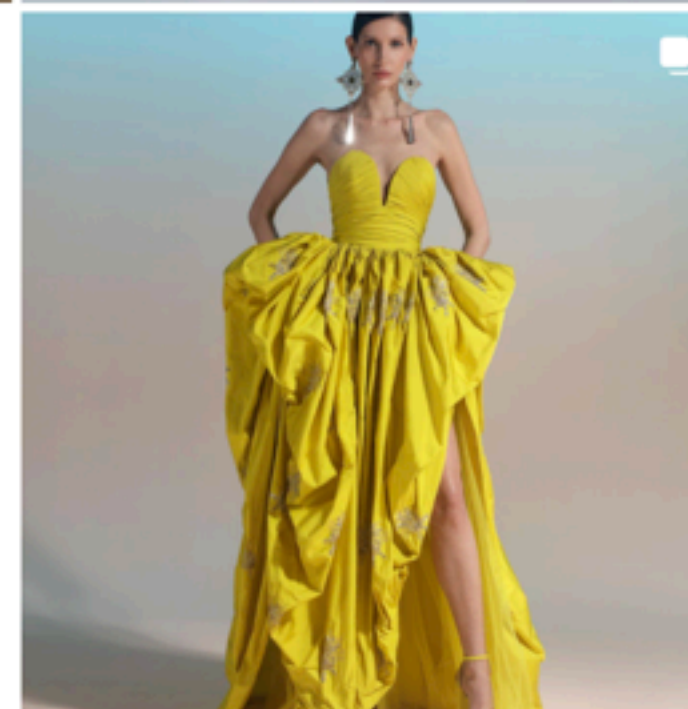
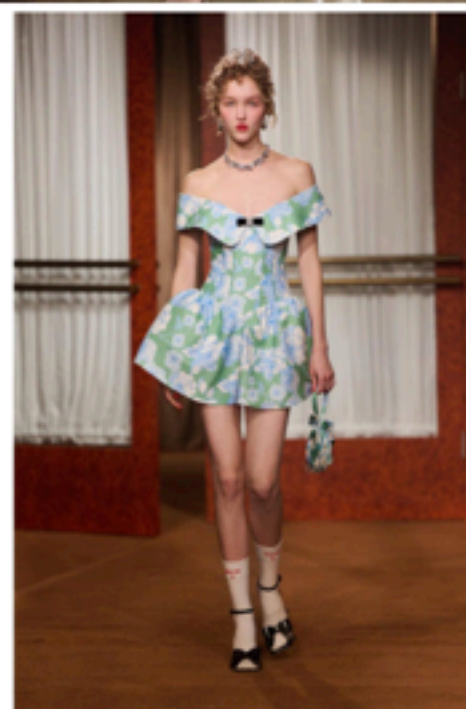
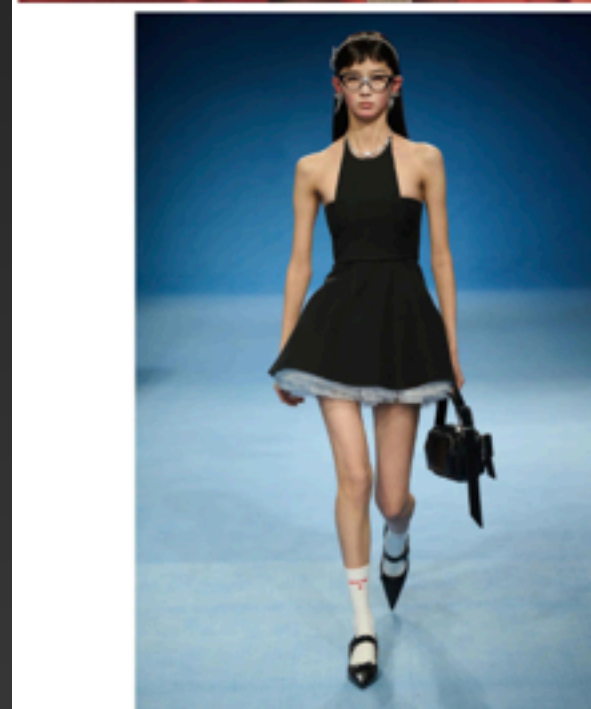


4 Years ago, I decided to make my own clothes

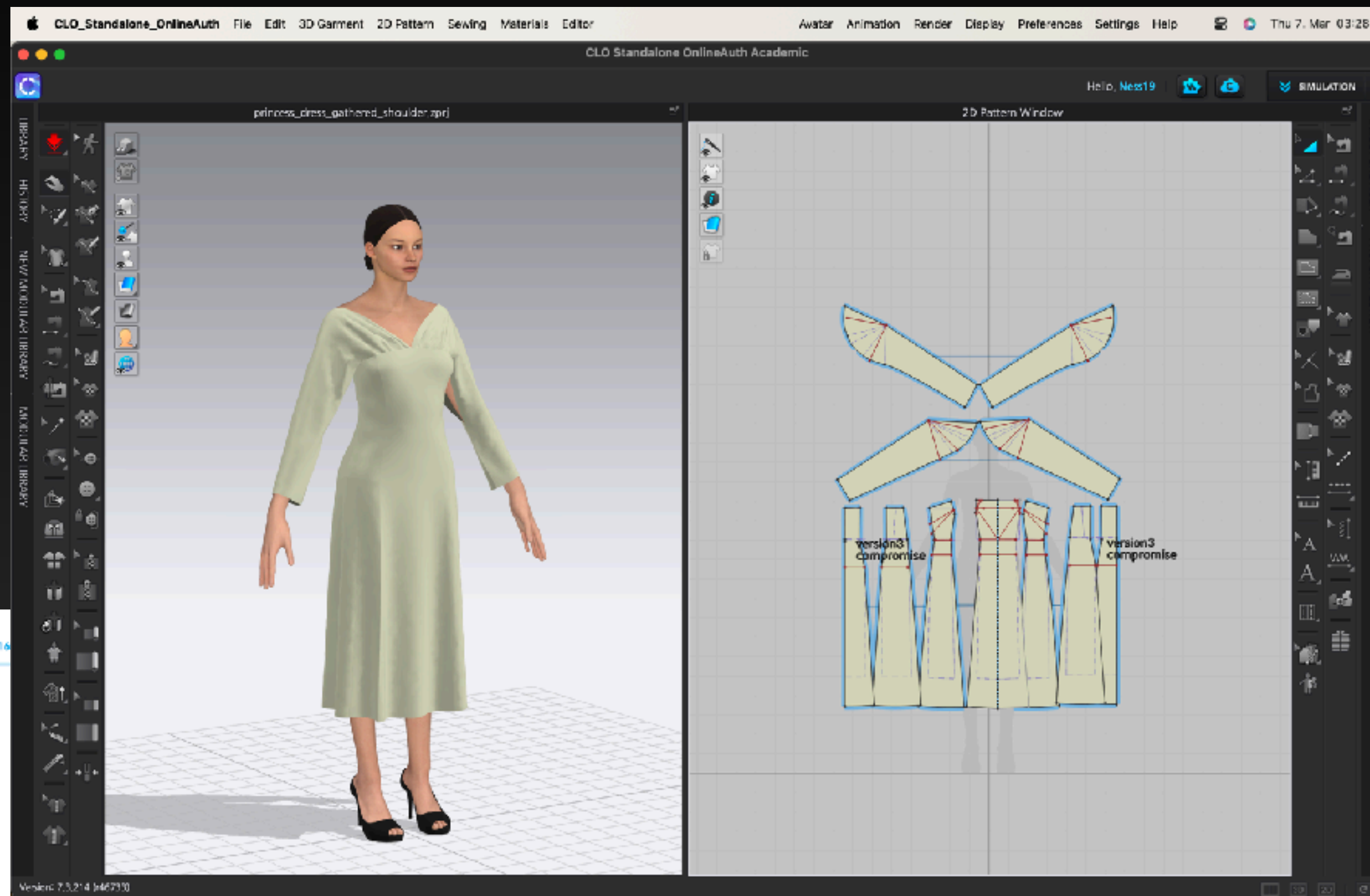


Problem Time

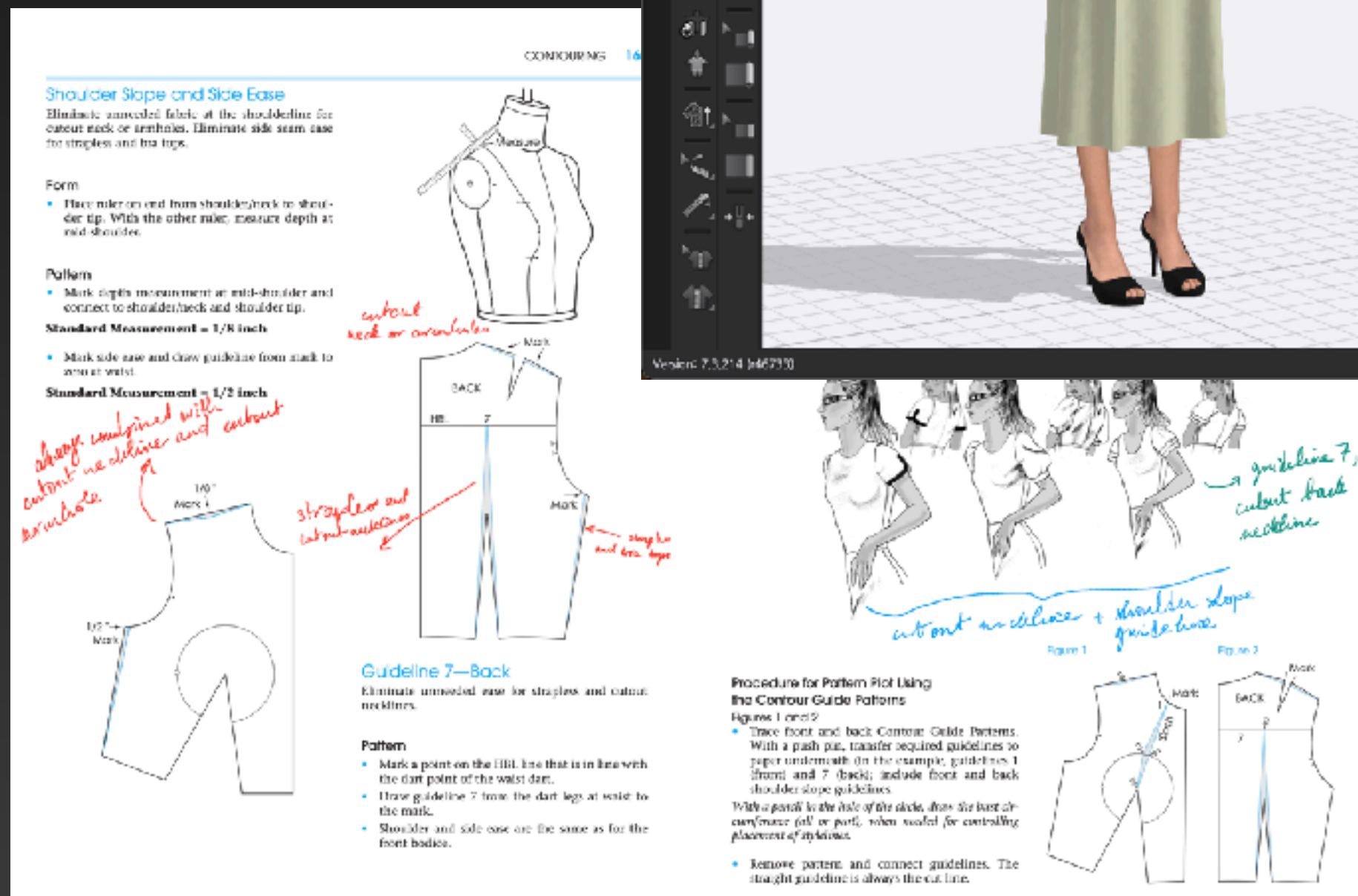
1. Design Generation



2. Pattern Construction according to Body Measurements



- Software cost: 50 eu/month.
- Initial learning: 2 years
- Time per pattern: 3-20h



3. Pattern Cutting from Fabric



- Fabric sourcing: 5-150eu
- Fabric cutting: 30min-3h

4. Pattern Assembly (sewing)



Sewing: 3h-40h

Solution Time

**Automate the Design and Pattern
Generation Cycle**

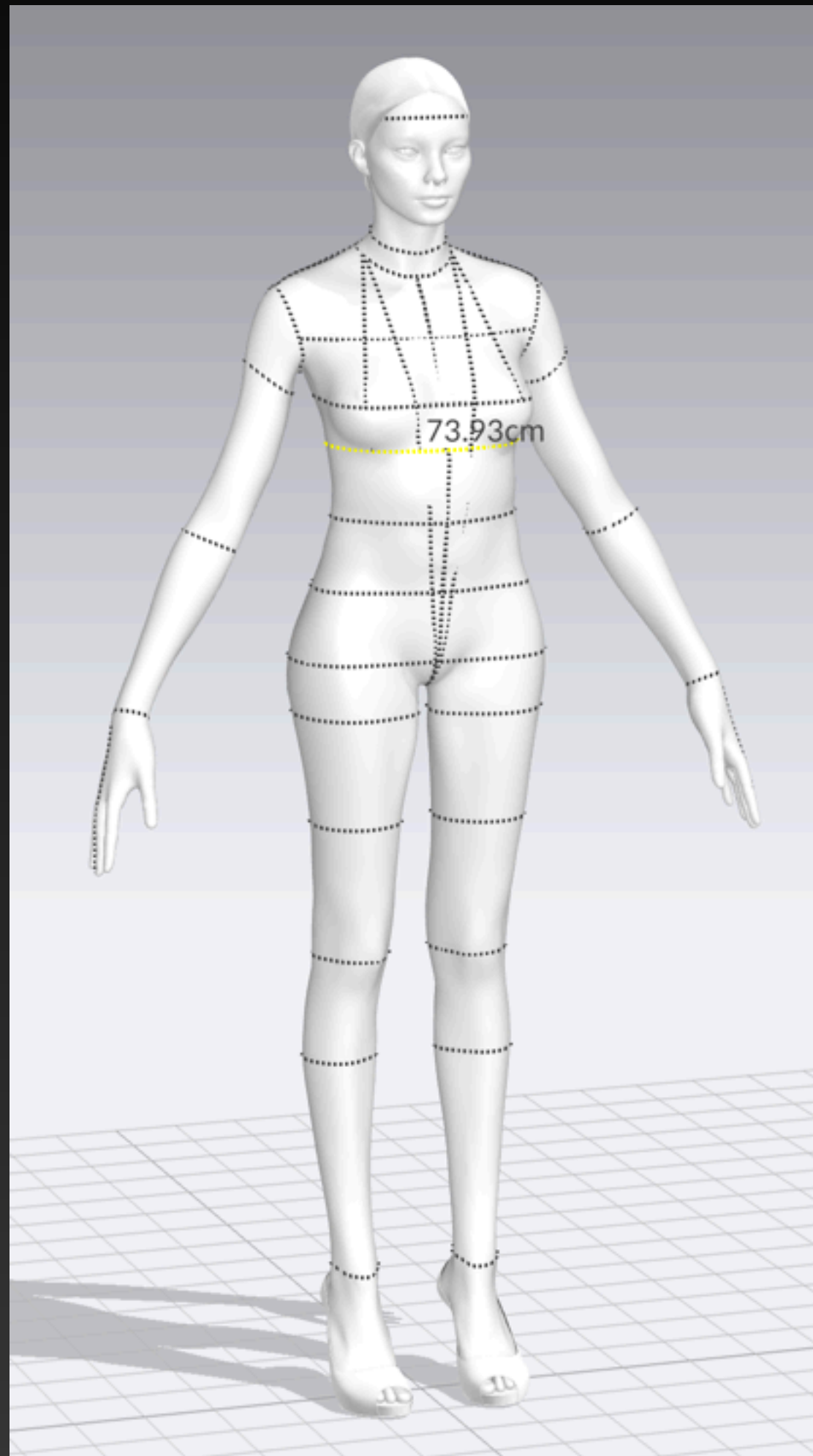
1. Design Generation



Multimodal Garment Designer: Human-Centric Latent Diffusion Models for Fashion Image Editing

Multi-modal Diffusion

2. Pattern Construction according to Body Measurements



Construct patterns as a function of body measurements using Parametric Design.

3. Pattern Cutting from Fabric



- Fabric sourcing: keep inventory of fabrics.
- Fabric cutting: use laser cutting machines for unique garment pieces creation.

4. Pattern Assembly (sewing)



Local economy: uber for sewist
Any person with sewing machine and sewing
Skills can assemble the garments
Our system creates comprehensive assembly instructions
-> sustainable approach

Numbers Time

**“There is a 2.7 Billion USD projected
personalisation market by 2027.”**

McKinsy 2023

“Gen Z and Gen Alpha value brands that are willing to collaborate with them and demand a more participatory role in brand development.”

McKinsy 2023

**We Are the first to Consider
fully custom clothing for B2C**

Demo Time

1. Enter Body Measurements

Sewing Pattern Configurator

Height (cm)

170

-

+

Weight (cm)

70

-

+

Bust_girth (cm)

90

-

+

Waist_girth (cm)

70

-

+

Top_hip_girth (cm)

95

-

+

Inside_leg_height (cm)

77

-

+

Shoulder_length (cm)

45

-

+

Upper_arm_length (cm)

30

-

+

Lower_arm_length (cm)

25

-

+

Neck_base_girth (cm)

37

-

+

Thigh_girth (cm)

55

-

+

Ankle_girth (cm)

22

-

+

Armscye_girth (cm)

45

-

+

Create Avatar

2. Avatar is automatically created with custom measurements

Create Avatar

Avatar creation initiated with ID: 8beabc9e-9063-4012-9557-dcaeb348cfb8

Avatar is ready for export.

Export job triggered.



Avatar downloaded successfully to exported_avatar.obj.

3. Select Design

Export job triggered.



peplum_top.yaml
strapless_dress.yaml
asymmetric_skirt.yaml
dress_asymm_top.yaml
dress_50s.yaml
compound_skirt.yaml
lapel_dress.yaml
standing_lapel_bootcut.yaml
peplum_top.yaml

Generate Pattern

Select a Design Parameters File:

peplum_top.yaml

Generate Pattern

4. Pattern is Generated based on body measurements

