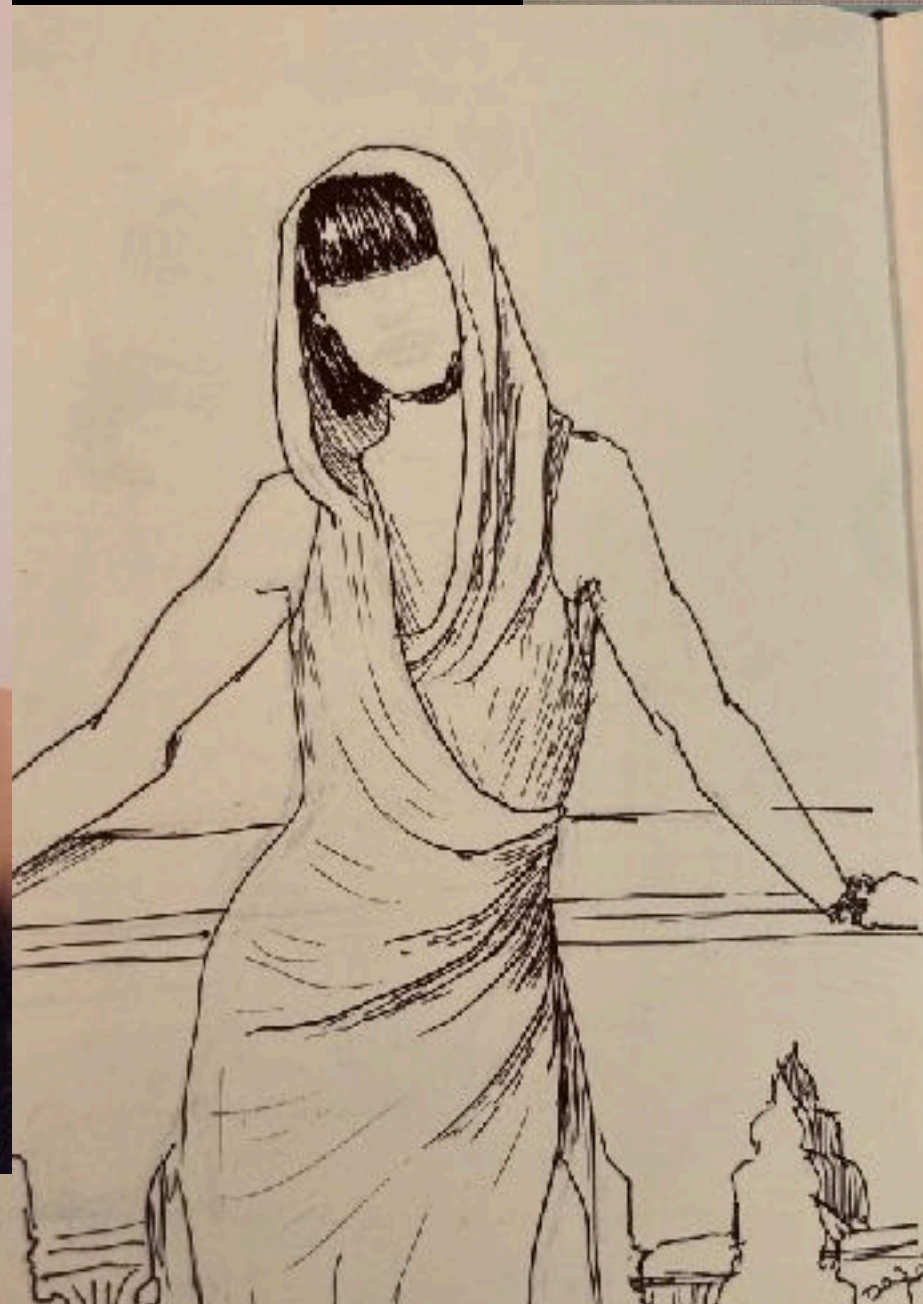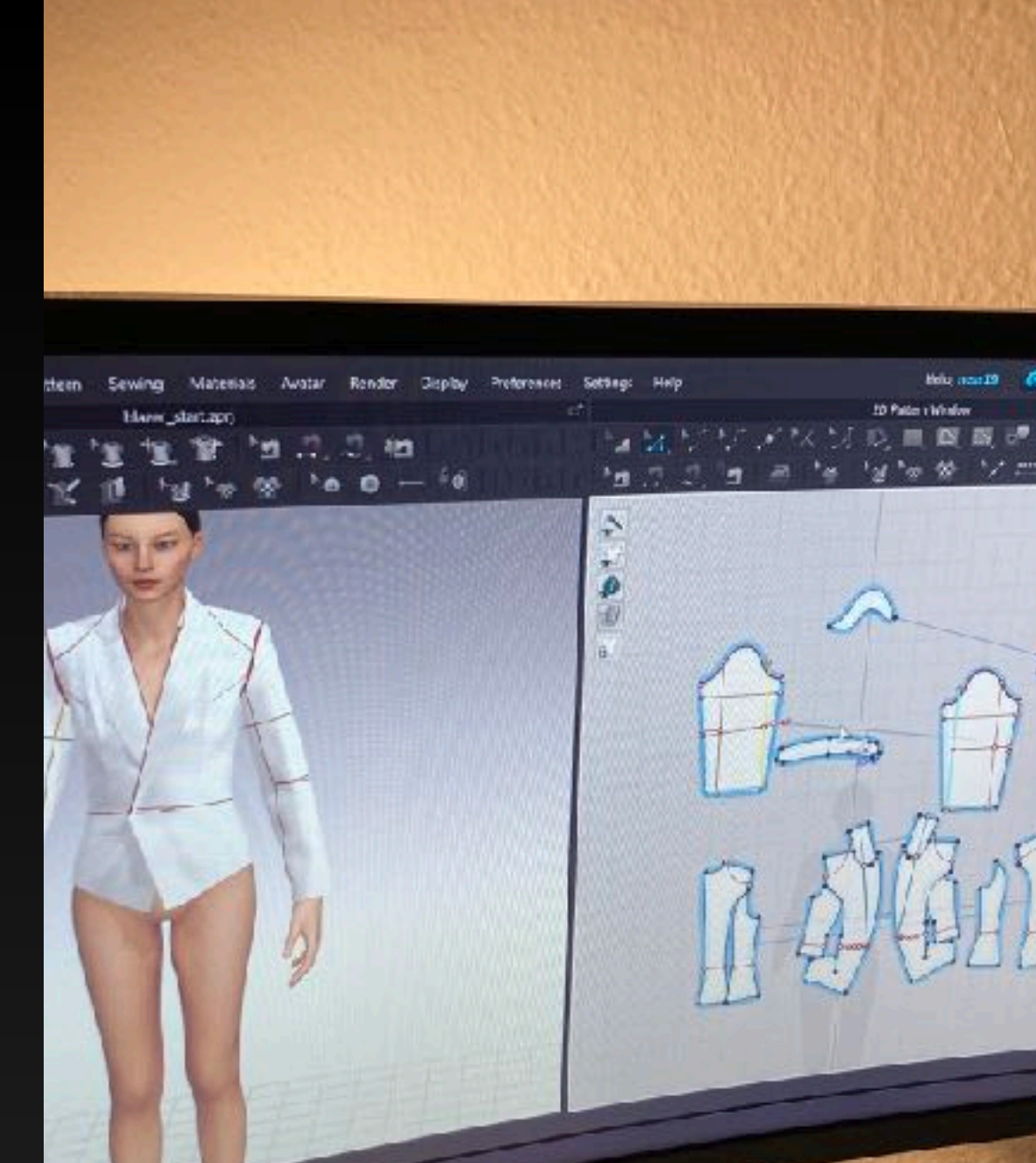# La Vipère

Custom clothes for Everyone
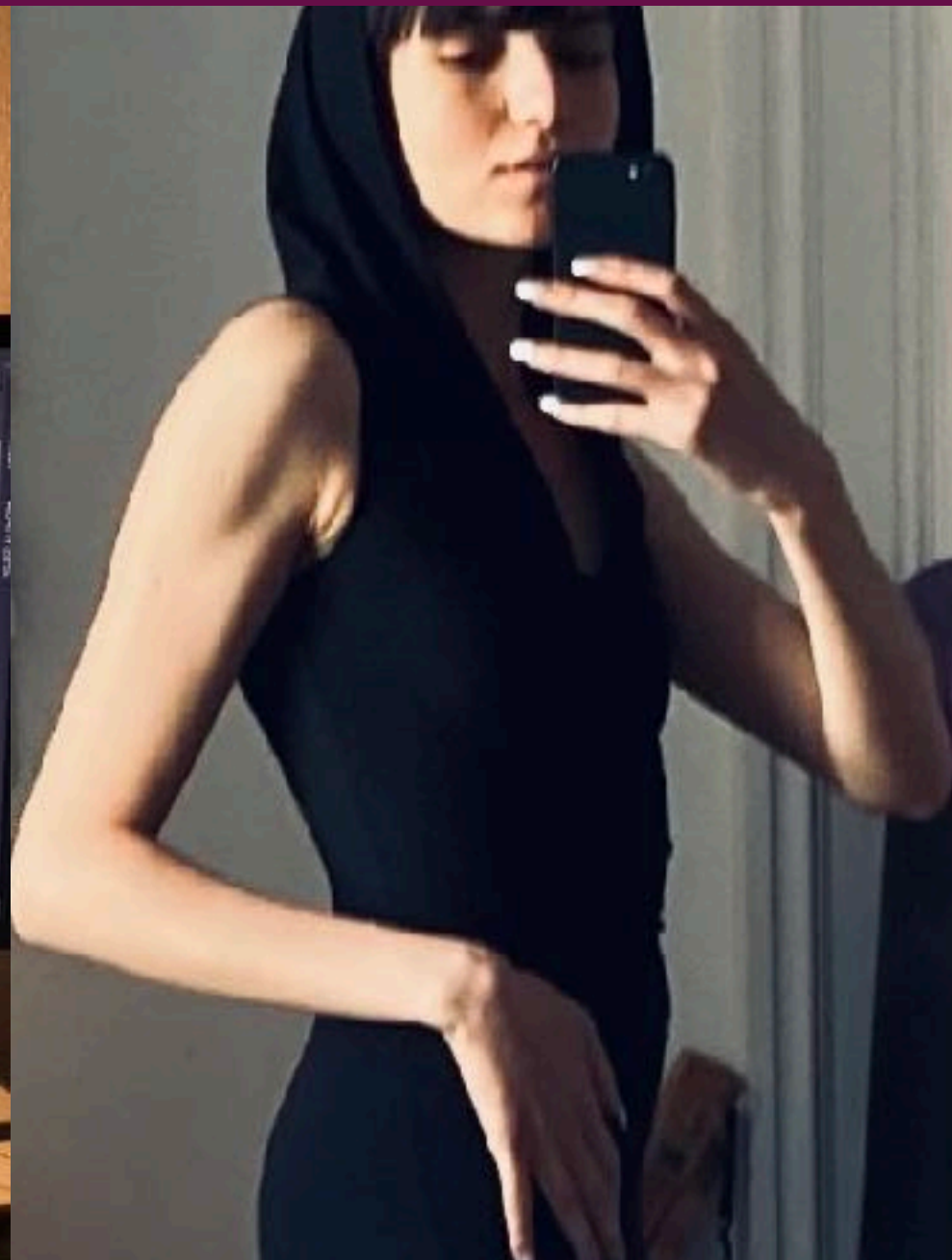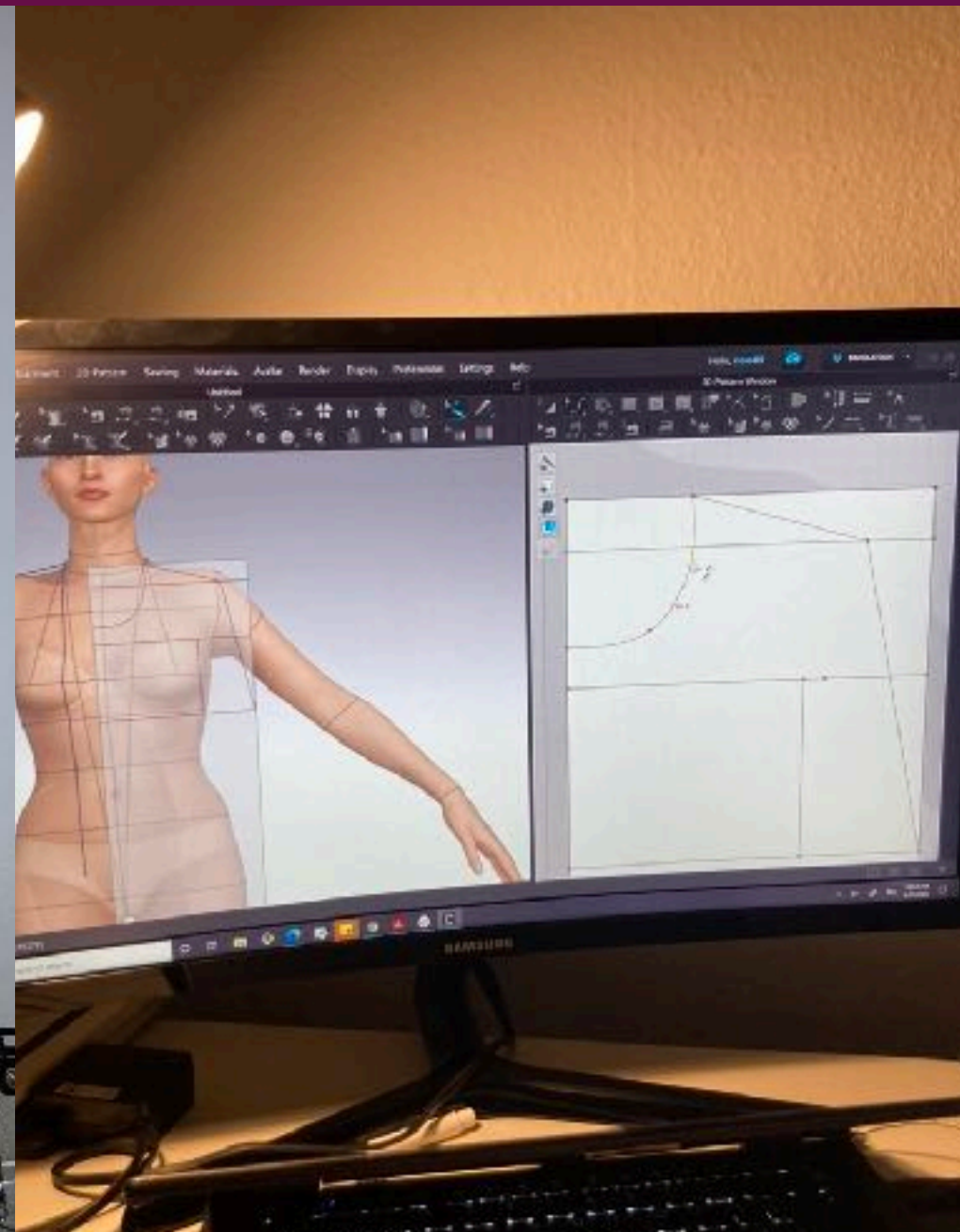
Nesrine Zarrouki, 07/03/2024

Personal Introduction

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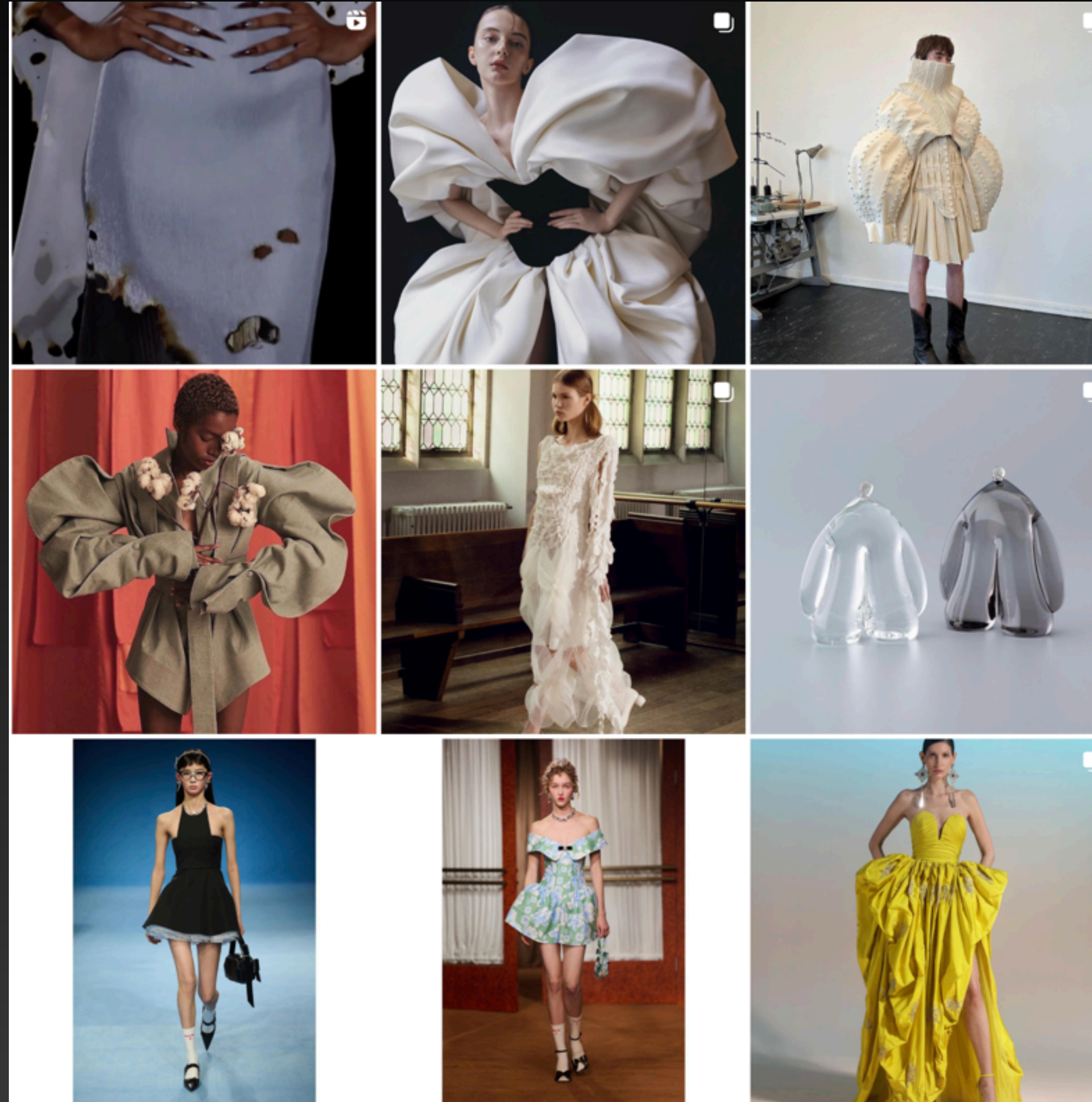- Passion: Visual Art and Design.

Story Time
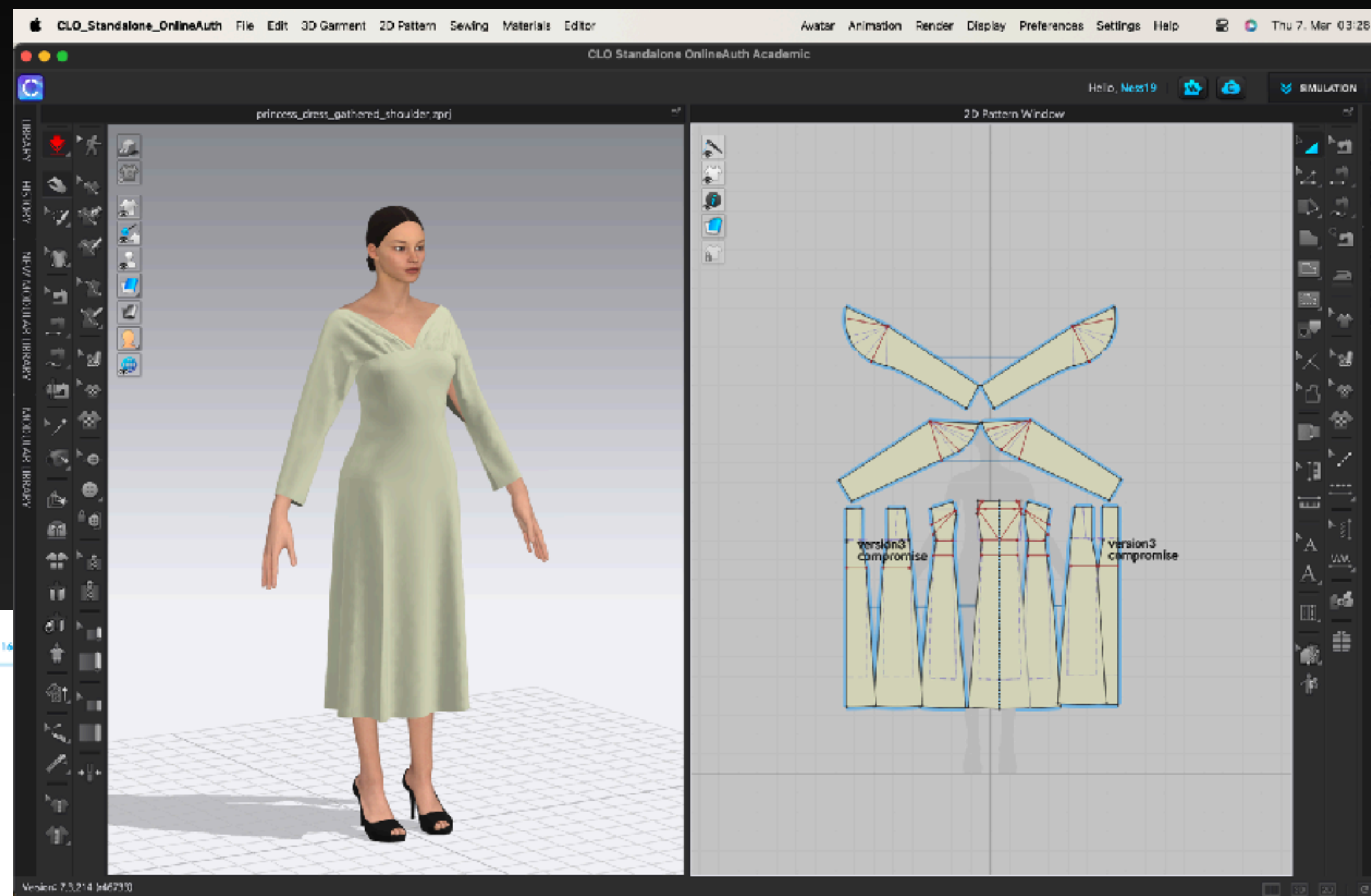
4 Years ago, I decided to make my own clothes
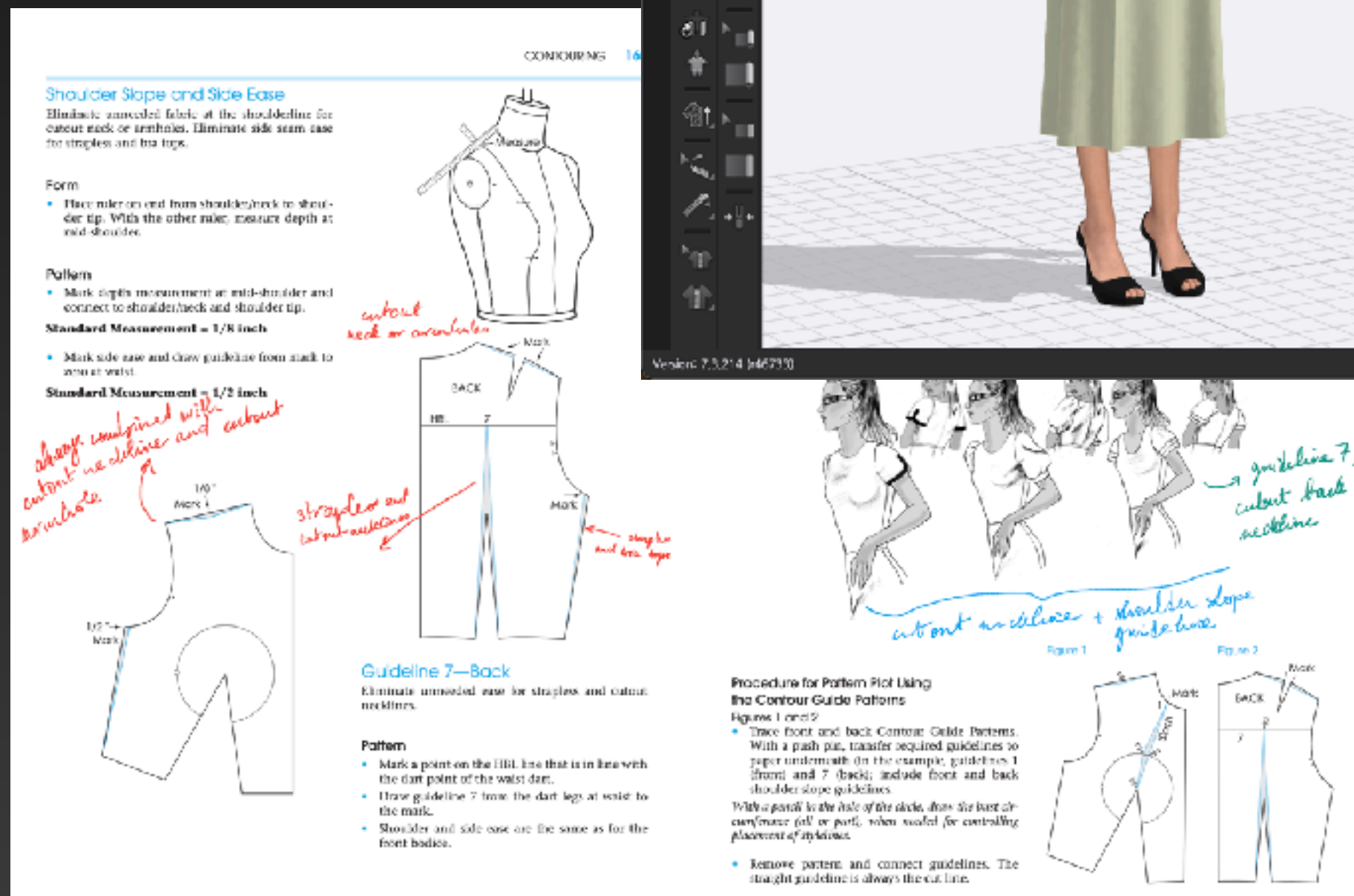
Problem Time

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
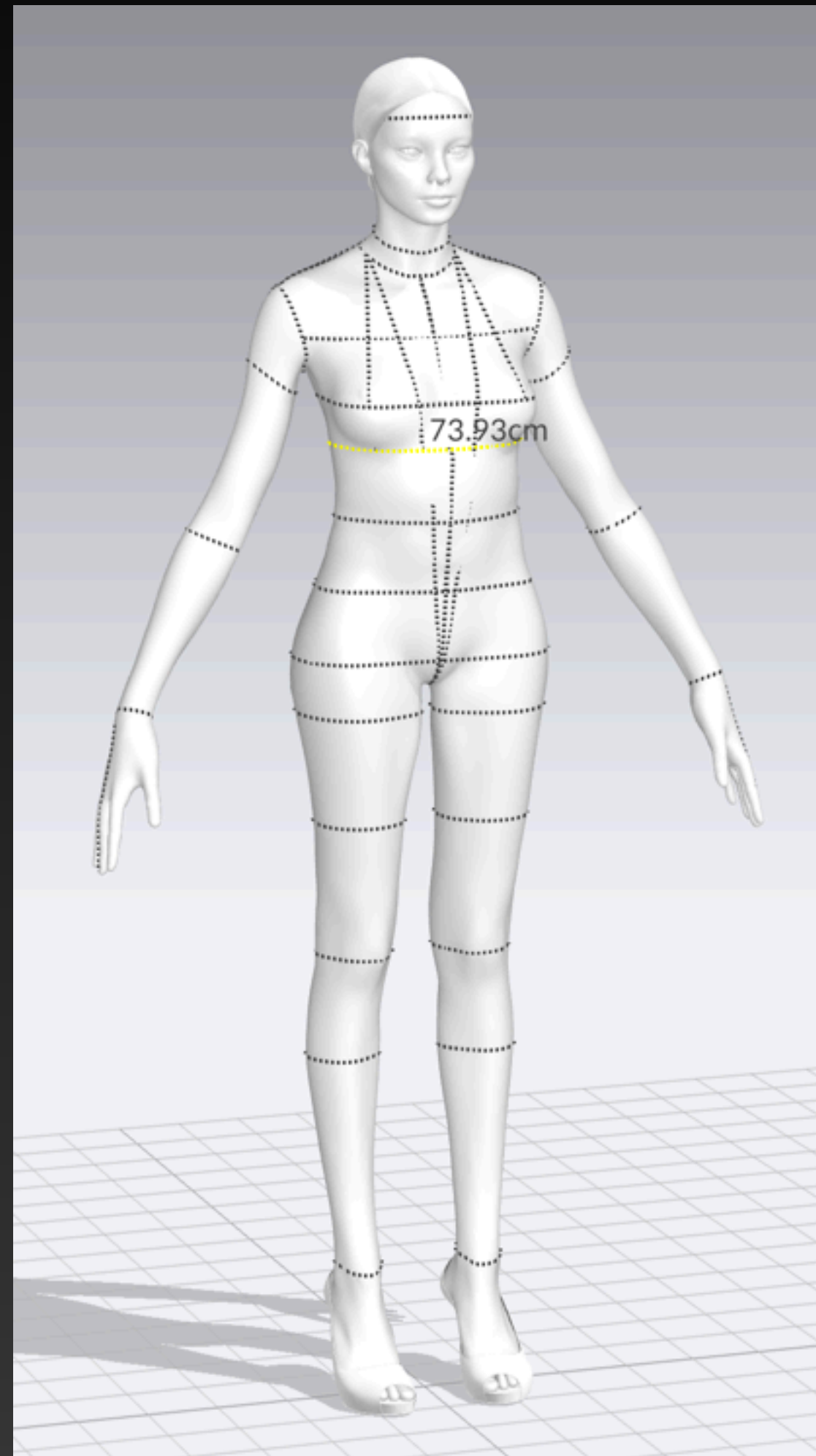## Automate the Design and Pattern Generation Cycle

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."

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

3. Select Design

4. Pattern is Generated based on body measurements

Generated Sewing Pattern