

03 RESEARCH METHODOLOGY AND RESEARCH METHODS

3.1 Case Studies

A case study analysis of four brands – Arc'teryx Veilance, Johanna Parv, The North Face, and Lemaire. Which was conducted to collect strategies and best practices from existing products in the relevant field. Each brand was selected to reflect a different aspect of the research vision: Veilance for technical urban wear, Johanna Parv for elegant yet functional womenswear, The North Face for outdoor performance, and Lemaire for timeless unisex style. The use of case study methods enables a deep understanding of how to design solutions in the real-world balance form and function, thereby informing my design framework. For each brand, I reviewed design lookbooks, brand literature, and third-party analyses.



Fig 3.2 Sethu Ncise (Instagram, 2017)



Fig 3.3 JOHANNA PARV (2024)

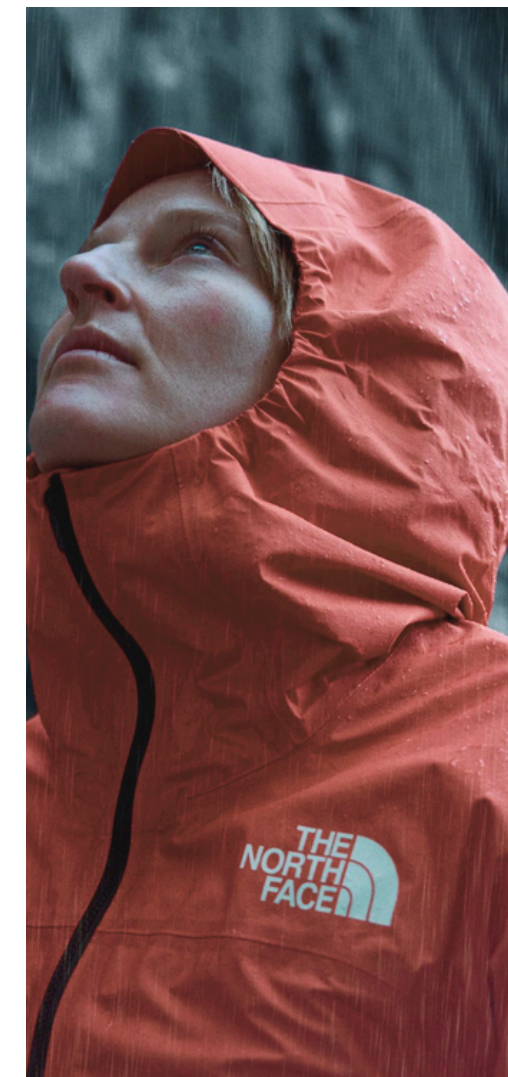


Fig 3.4 The North Face (2025)



Fig 3.5 Lemaire (2018)

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a. Arc'teryx Veilance

Emerged as a pertinent model of minimalist design fused with extreme functionality. Kasuga, Veilance's director, describes their goal as crafting garments that offer "freedom... whether it's the summit or the office, you know the gear will get you there comfortably" (MAEKAN, 2020). This ethos of enabling seamless transition between outdoor and professional settings directly inspired my project's goals. Veilance garments also demonstrated refined solutions like laser-cut seams. Hidden ventilation features are also considered in my prototypes.



Fig 3.6 Arc'teryx Veilance (2025)

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b. Johanna Parv

Brand provided a case focused on women’s cycling attire that remains in office appropriate. As noted by Parv’s collaborators, her designs “combine comfort with elegance... you can cycle to work in it and then wear it all day at the office, without it limiting the wearer in any way” (Metal Magazine, n.d.). This example affirmed that fashion-forward design can coexist with complete freedom of movement. I researched Parv’s pattern innovations (such as garments with zip openings for cooling, and modular accessories) and her integration of ergonomic details as decorative elements (Metal Magazine, n.d.). These informed my approach to making functional elements (like adjustable hems or backpack-compatible vents) with aesthetically subtle.



Fig 3.7 - 3.8 Johanna Parv (2024)

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c. The North Face

The North Face provided a baseline for performance: previous product information I reviewed to understand key technologies (e.g. Gore-Tex membranes, articulated cuts) that enable comfort in harsh conditions. This case highlights the importance of technical fabrics and rigorous testing – for example, The North Face’s use of weatherproof yet breathable textiles and durable construction set a standard of my prototypes. The cultural phenomenon of “gorpcore³” (much of which builds on The North Face and similar brands) was also examined. It illustrated the rising consumer desire for “utilitarian design fused with fashion”, where features like multiple pockets or technical hoods become style statements (Heal, 2024).



Fig 3.9 - 3.10 The North Face (2025)

³ Gorpcore is a fashion style inspired by functional outdoor apparel, adapted for everyday urban wear. It emphasizes practicality (multiple pockets, durable and weather-resistant fabrics), technical features (waterproof coatings, adjustable hoods, zippers), and minimalist, neutral aesthetics, blending outdoor functionality with city style.

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d. Lemaire

Finally, Lemaire offered a case of “functional elegance” in everyday apparel. Renowned for relaxed tailoring and gender-neutral silhouettes, Lemaire’s design philosophy emphasizes timelessness, versatility, and subtle utility (HARRESØ, 2025). I noted that Lemaire consistently uses high-quality natural fabrics and achieves comfort through roomy, adjustable cuts without obvious sport details. This showed that unisex, seasonless garments can still feel luxurious and polished that is a quality I aspired to in my designs.

Overall, analyzing these cases provided concrete design references and validated my design direction. Each case study acted as a benchmark: if my proposed garments could approach Veilance’s technical rigor, Parv’s elegance-in-motion, The North Face’s functionality, and Lemaire’s understated style, I would consider the research outcome successful.



Fig 3.11 - 3.12 Lemaire (2025)


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3.2 Interviews/Survey

To ensure that the garments addressed genuine user needs, the study employed a mixed-methods approach, combining an online survey with semi-structured interviews. This allowed the research to capture both quantitative insights and qualitative experiences from the target audience (Fig 3.13).

Participant Profile:

- Adults aged 20–40
- Office workers who experience physical strain from conventional workwear, yet require clothing that is slightly formal or stylish while still allowing freedom of movement
- Designers with experience in ergonomic or inclusive fashion
- Business professionals who frequently transition between different environments
- Commuters who rely on public transport or cycling



CUSTOMER PROFILES

Any Gender - Gender fluidity

Age 20 - 40

Daily style

- Minimalist style – clean lines, neutral colours, and timeless pieces
- Sleek, modern, and fitting
- All black with few design details
- Elegant, suit

People who commute daily via public transport, bicycle, or walk like fashion stylish, well-designed garments. Such clothing also serves as necessary professional clothing for work. They often feel uncomfortable or have restricted movements due to the characteristics of their clothes during their daily work. They accept and like to wear unisex clothing.

Mid-range consumption level.

Fig 3.13 Customer Profiles (Xu, 2025)

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3.2 Interviews/Survey

Data collection was conducted through online questionnaires (see appendix 7.1). The survey asked participants to evaluate various aspects of their current work clothing. The collected data were analyzed to identify recurring themes. For instance, frequent mentions of shoulder and neck discomfort highlighted the need for targeted ergonomic support in these areas. Likewise, consistent requests for additional, discreet pockets (commonly cited in women's workwear) informed the integration of stealth storage solutions.

This research also established design success criteria: the final garments should effectively address the most prevalent complaints and usability issues identified by users. Participants were informed that the project aimed to develop experimental clothing that merges activewear functionality with office-appropriate aesthetics, and that their feedback would directly influence the features of the prototypes. By adopting this inclusive, participatory approach, the project incorporated diverse perspectives, ensuring that the resulting designs are both practical and broadly appealing

3.3 Object-Based Research

Object-Based Research (OBR) is one of the most important methods in the analysis of clothing and provides objective insights into design, construction, and materials that are difficult to access within digital or theoretical frameworks (Mida and Kim, 2015). Mida and Kim (2015) argue that OBR allows for the critical analysis of the objective qualities of clothing, taking note of, for example, the construction of seams, material elasticity, and ergonomic designs in practical contexts. OBR is especially useful in practical applications for detecting ergonomic flaws and structural limitations, as well as analyzing materials' behavior in movement and pressure (Mida and Kim, 2015).

In this case, the current analysis starts the process of object-based analysis (see appendix 7.2) and critique on three types of clothing: office outerwear that currently exists, hiking clothing, and fashion-forward clothing in the realm of "gorpcore." Each of these types of clothing will be analyzed for its structural and ergonomic attributes (Fig 3.13 - 3.14) in order to apply them towards the formulation of ergonomic office clothing that is unisex in nature.

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3.3 Object-Based Research

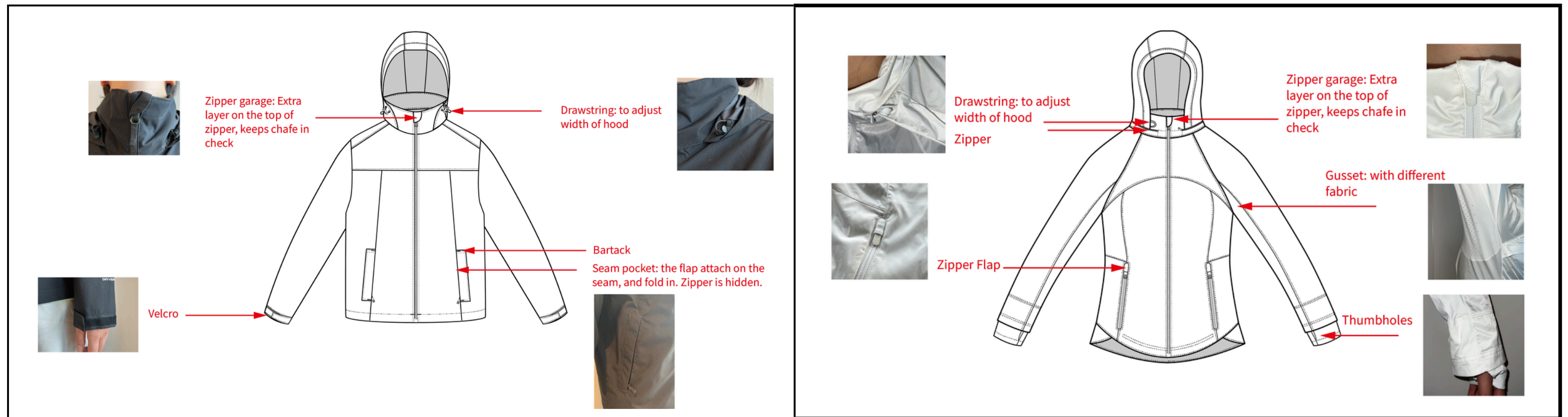


Fig 3.13 - 3.14 Xu (2025)

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a. Office Wear

Traditional blazers and coats will be studied to identify areas where professional silhouette requirements restrict mobility. Key issues include restricted shoulder rotation due to stiff interfacing, limited breathability from synthetic linings, and tension points along sleeve seams. However, these garments often succeed in achieving clean lines and symbolic authority through structured tailoring. Dress or trousers, which are not so convenient when people are moving. In the process of movement, the length will change with the movement of the body, and it is easy to step on or trip. Office wear is also very inconvenient when taking public transportation (Kirk, 2014).



Fig 3.15 Limited of Tailoring Jacket (Xu, 2025).

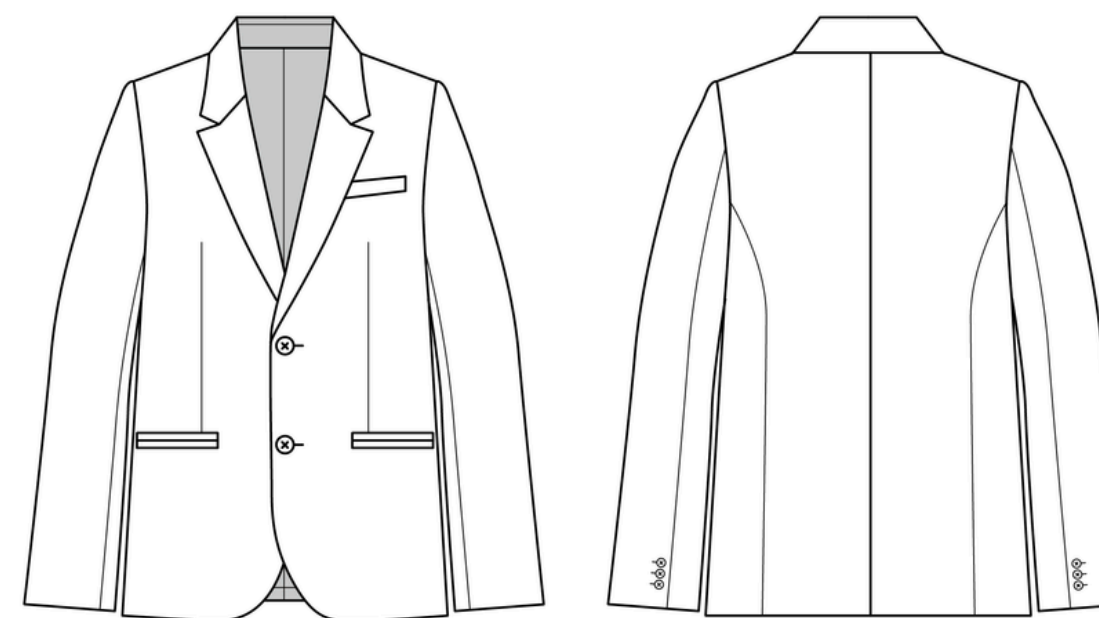


Fig. 3.16 Armani Tailoring Jacket Object Analysis. (Xu, 2025).

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b. Hiking Clothing

Performance garments like softshell jackets and trail-layered shells will be deconstructed to assess how ergonomic features support extended movement and temperature regulation. Functional elements such as articulated elbows, ventilation zippers, lightweight yet insulating textiles, and elasticized cuffs demonstrate how movement and comfort are prioritized. These garments also integrate modularity through detachable hoods or adjustable hems, which offer design strategies for adaptability in office contexts.



Drawstring in the hood

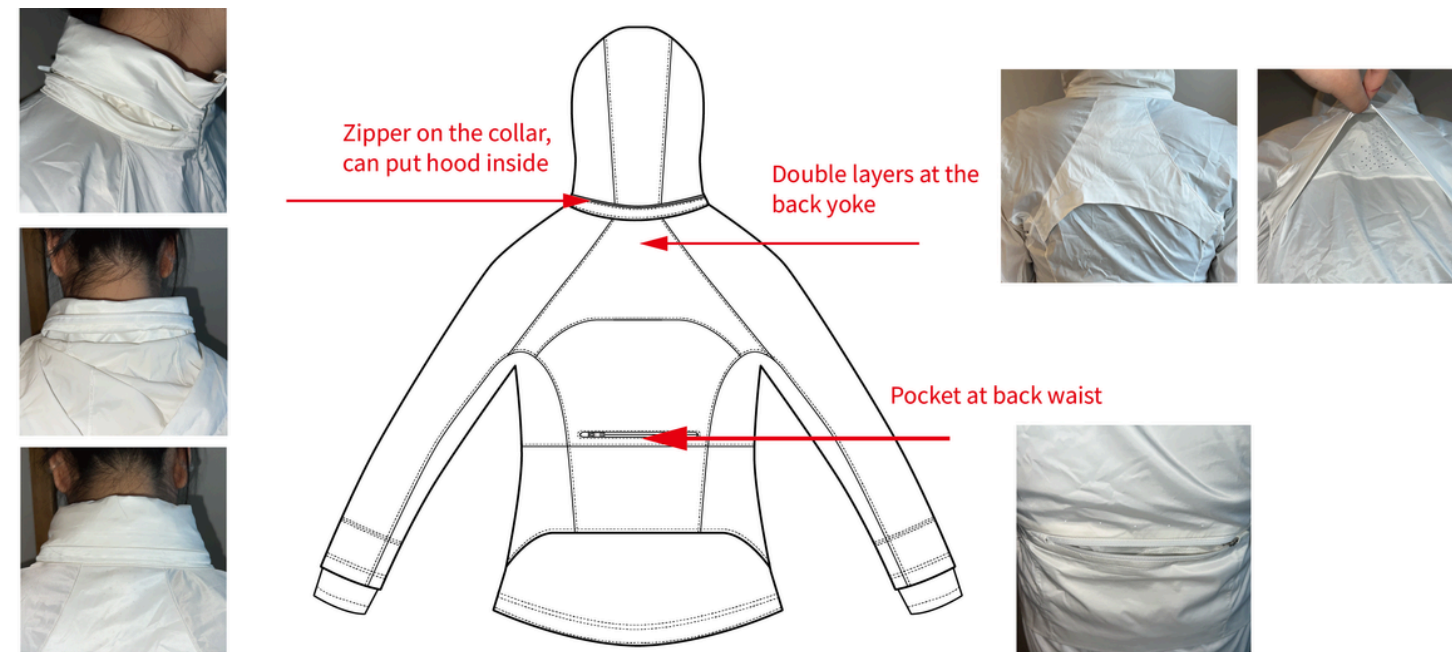


Fig 3.16 - 3.20 Object research (Xu, 2025).

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c. Gorpcore Aesthetic Garments

Gorpcore Aesthetic Garments: Fashion items influenced by technical outdoor wear but styled for urban use—such as those by Arc'teryx Veilance or ACG (Nike)—will be assessed for their hybrid aesthetic. These pieces demonstrate how activewear design elements (taped seams, tech pockets, DWR finishes) can be reimagined through minimal silhouettes and neutral color palettes. Their success in blending utility with understated formality presents a promising precedent for designing ergonomic, stylish office wear.

By organizing findings from the analysis of office wear, hiking gear, and gorpcore fashion into a practical framework, this study aims to bridge the gap between functional performance and professional style. A critical analysis of existing office garments will examine their structural limitations. Garments such as blazers, dress shirts, and trousers will be deconstructed to study seam placements, pressure points, and common mobility constraints. Detailed notes and photographic documentation will be used to record ergonomic weaknesses, such as lack of flexibility around the shoulders or restricted airflow.

Source Garment	Design Inspiration / Strengths	Design Opportunities / Improvements
Office Wear	Structured tailoring, clean lines, professional silhouette	Shoulder mobility, breathability, sleeve & torso tension, hem length adjustment, dynamic movement
Hiking Clothing	Articulated elbows, stretch panels, ventilation, modular features	Reduce bulkiness, adapt casual aesthetic to professional look, integrate ergonomic comfort into office-appropriate silhouette
Gorpcore Garments	Functional pockets, taped seams, tech fabrics, neutral/minimalist style	Adjust casual elements for formal appropriateness, refine hardware & pocket visibility, ensure ergonomic benefits translate to office use

Table 3. Five key criteria (Elsayed et al., 2019)

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3.4 Practice-Based Design Research

Design experiments will be performed to convert ergonomic findings into practical clothing designs. Prototypes will be tested and refined based on feedback from people wearing them. This is particularly relevant when it comes to implications for future designs. Prototype development will include the following elements:

- Make use of CLO-3D to demonstrate the effect of wearing garments on movement and pressure points during activities. CLO-3D software will be employed for carrying out pressure mapping and fitting analysis (Avadanei et al., 2022). Thus, stress points and restricted areas can be visualized in real-time, and this is very informative on areas that need adjustment (Fig 3.21-3.24).
- Simulations will provide insights into the behavior of fabrics when confronted with seams that can limit movements, and different positions of the human body and their effects on the fitting of garments. Thus, the data-informed approach not only informs the improvement of designs, and it also makes it easy to explore potential solutions that can be used in keeping the comfort and smooth look when performing bodily movements like commuting or reaching.

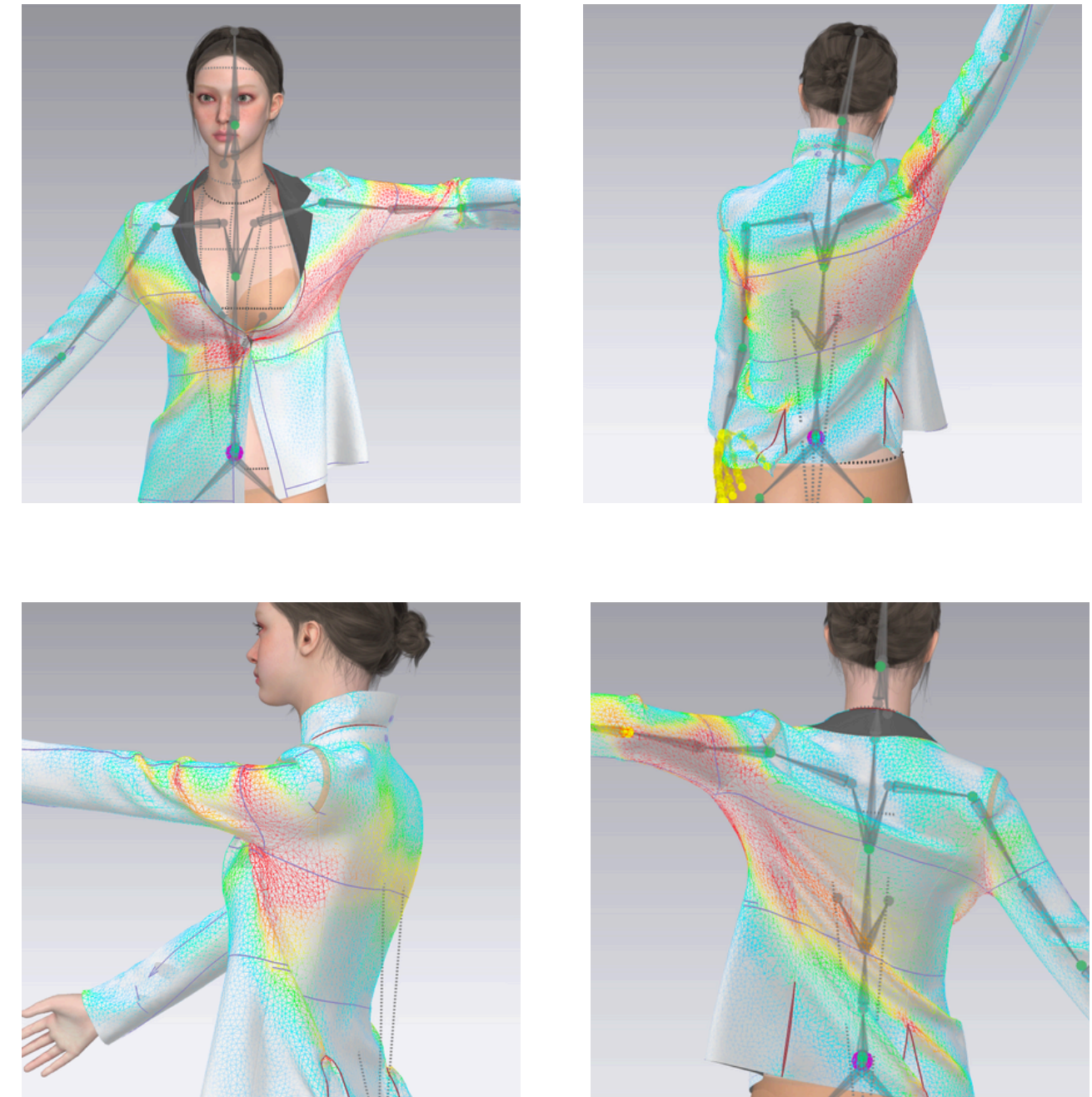


Fig 3.21 - 3.24 Object CLO 3D simulations (Xu, 2025).