

TerraSense

Experience Nature with Every Step



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Introduction

Walking barefoot on nature feels different with every step. Soft grass, warm wood, loose sand, and smooth stones each create a unique sensation under our feet. Today, most footwear separates us from these natural experiences.

This project, Journey Through Nature, is an attempt to bring back that connection using sustainable and natural materials. The slipper is handcrafted using coconut coir, coconut coir rope, coconut shell, natural buffalo leather, and natural fibres. Inspired by four natural terrains—grass, wood, sand, and stone—it features different textures that provide unique tactile sensations while walking. More than just a slipper, this project explores how natural materials and handcrafted textures can create a meaningful walking experience while encouraging sustainability, comfort, and a closer connection with nature.



Breathable



Natural Materials



Tactile Experience



Sensory Experience

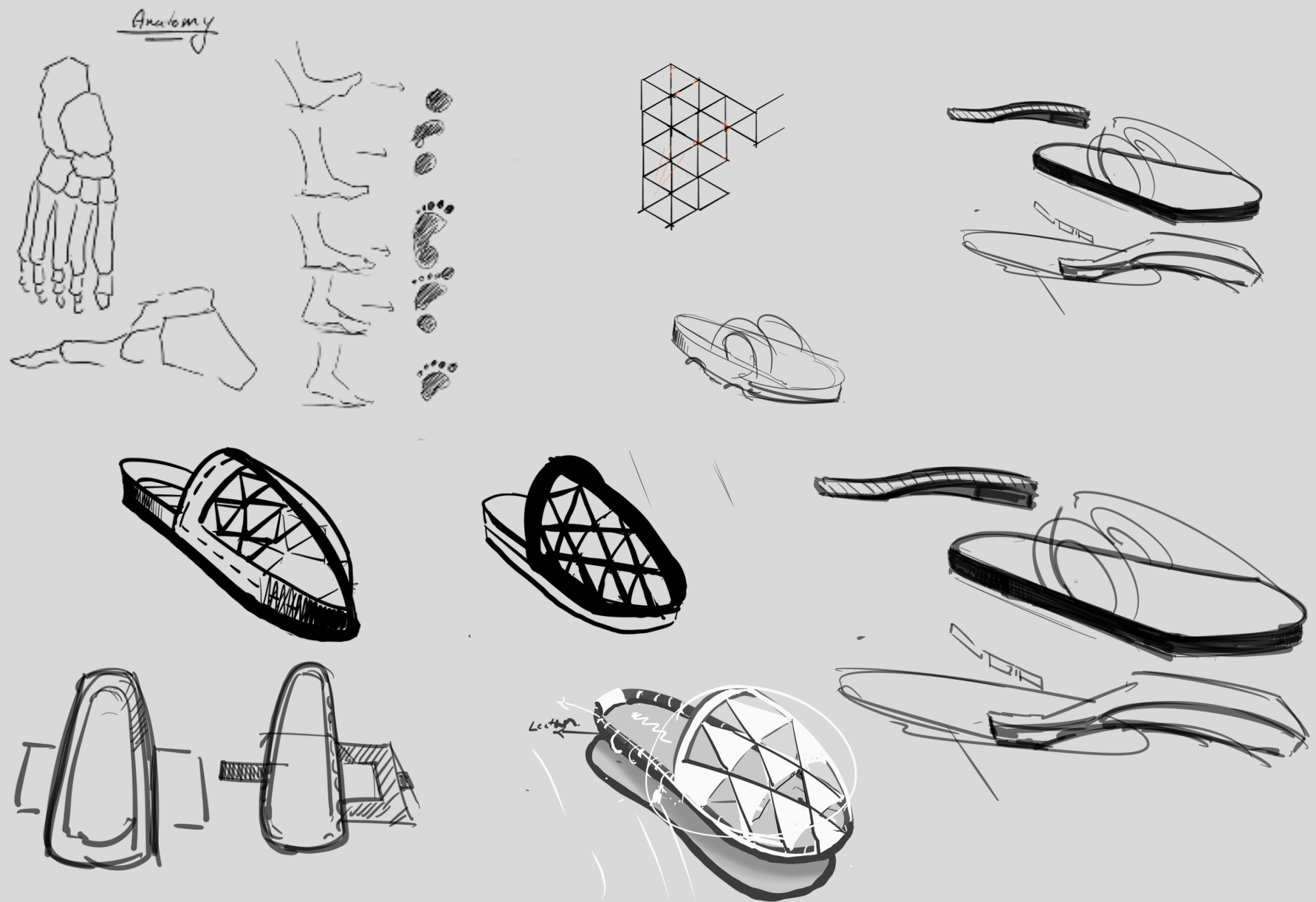
Sustainable

Modular Design

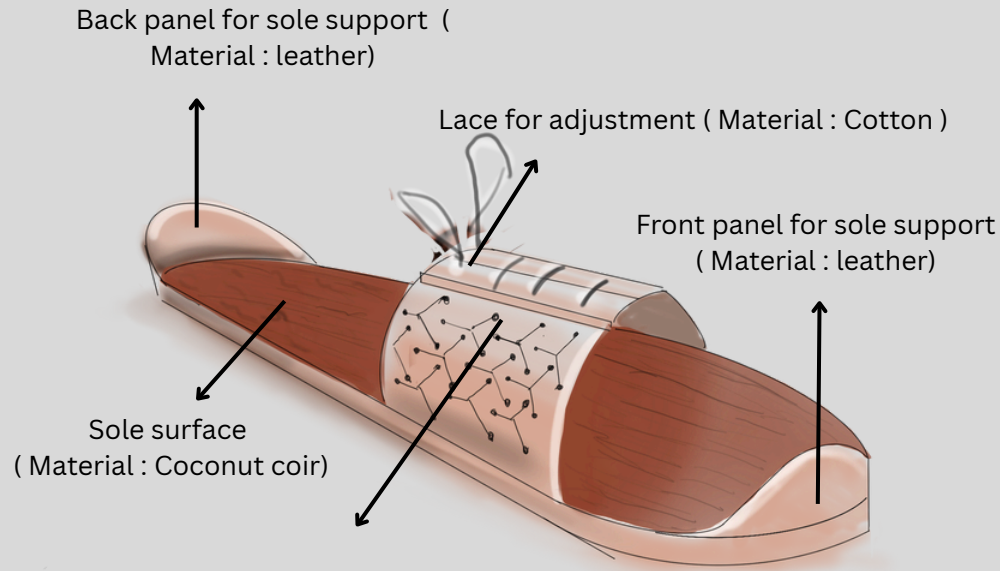
Materials Exploration



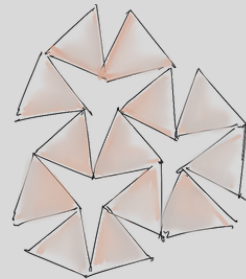
Rough Sketches



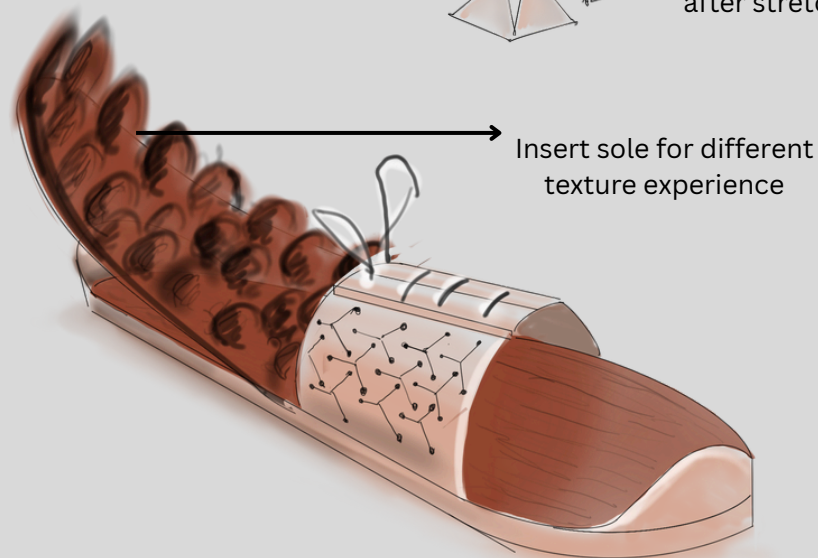
Final Sketch, Materials & Features



Triangle auxetic pattern for breathable and flexibility (Material : leather))

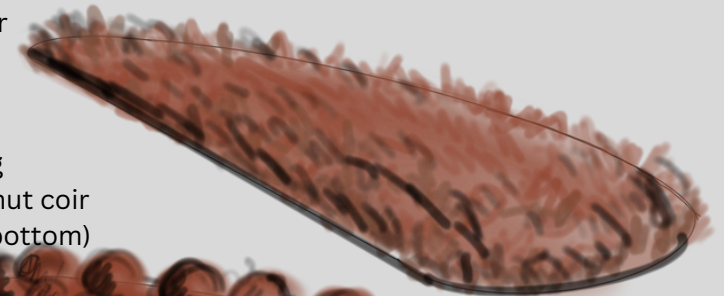


Auxetic pattern after stretching



Different types of soles for Sensory Experience

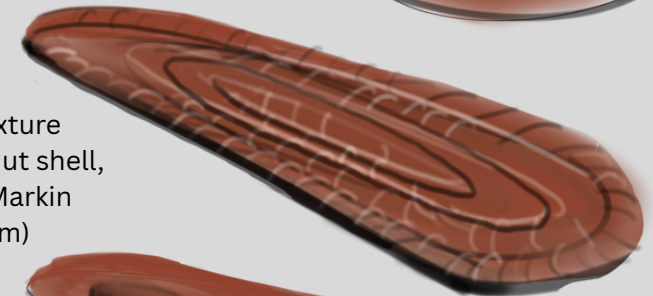
Grass (Material used : Coconut coir and Markin fabric for bottom)



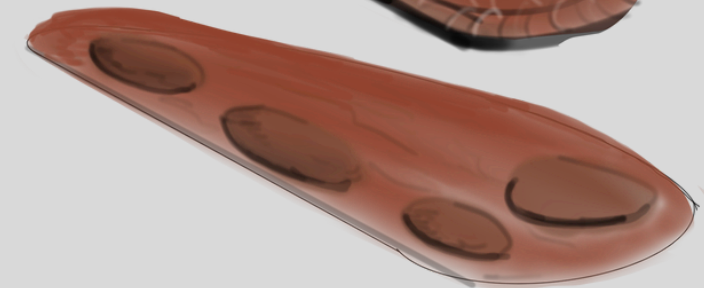
Soft Cushioning (Material used : Coconut coir and Markin fabric for bottom)



Wood inspired texture (Material used : Coconut coir and Markin fabric for bottom)



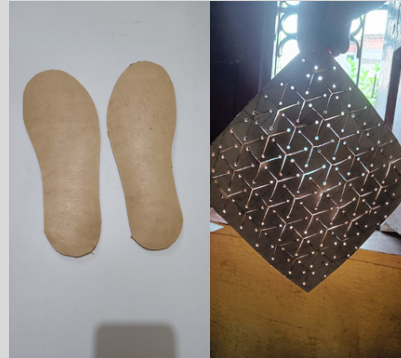
Stone-Inspired Texture (Material used : Coconut shell, Coconut coir and Markin fabric for bottom)



Construction

Leather Cutting

The outsole, upper, and strap were cut from natural buffalo leather, selected for its durability, flexibility, and ability to provide structural support to the slipper. An auxetic-inspired pattern was then hand-cut into the upper to enhance flexibility, stretchability, and adaptability to the natural movement of the foot.



Footwear Assembly

The coir sheet was first stitched to improve its structural strength and then cut into the shape of the slipper sole. Natural liquid latex adhesive was applied to bond the coir layers, and the leather upper and strap were attached to the sole. Once the adhesive had set, the entire assembly was reinforced with cotton thread stitching. Finally, a cotton lace was added to provide an adjustable and secure fit.

Interchangeable Footbed Construction

The coir sheet was first stitched to improve its structural strength. It was then cut into the shape of the slipper sole. Natural liquid latex was applied along the edges to secure the layers. Different terrain-inspired textures were created using coconut coir and coconut shell and reinforced with cotton thread stitching. Finally, the bottom of the sole was finished with cotton Markin fabric to provide a clean and durable base.











TerraSense explores how natural materials and handcrafted textures can transform everyday footwear into a sensory experience. By combining coconut-derived materials with interchangeable terrain-inspired footbeds, the project reconnects users with nature while promoting sustainable craftsmanship and material innovation.