

The Subtle Shift: How Arm Position Affects Full-Body Posture in 3D Scanning

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Abstract

This presentation explores how even moderate changes in arm position, such as raising the arms to 30-60 degrees, can noticeably influence a person's posture during 3D body scanning. Using multiple scans of a single subject with varied arm positions, the presentation highlights how pose choices affect apparent body shape, symmetry, and the accuracy of the scan. While the study focuses on one individual, the observations align with broader patterns seen through years of hands-on scanning experience across a diverse range of body types.

Common scanning poses such as A-pose and T-pose are often selected for practical reasons, including software requirements or ease of processing. However, they can unintentionally introduce distortions, especially in the chest, shoulders, and spinal alignment. This session examines these effects, including shifts in measurements, posture changes, and the difficulty of maintaining a natural stance during the scan process.

Through visual comparisons, such as distance maps, x-ray overlays, and short video clips, this presentation illustrates how small pose adjustments can influence the overall body geometry captured in a scan.

These findings may be particularly relevant for custom garment production, and they also offer insight for developers of scanning hardware, software, and workflows.

