



Treedy's offers precise 3D scanning solutions for the fashion industry

TODAY'S FASHION CHALLENGES

The growth of e-commerce has led to declining footfall in fashion stores while the cost of maintaining physical retail locations is on the rise: **customer visits are becoming increasingly expensive.**

The online fashion industry is challenged with high costs related to the **high rate of returns.** Returns have a huge impact on both the financial performance of brands and on the environment.

With increasing labor costs and today's consumers' **desire for ever-more personalized products,** automation and robotization are quickly making their way into the sector of made-to-measure garments.

160 Billion \$ logistical cost per annum of returns on fashion e-commerce sales

17 Billion items returned in 2018

37 % of all items purchased online get returned to the merchants

64 % of all returns are fit related

4,7 Million tons of CO2 from gas emissions per year caused by returns

TREEDY'S SOLUTIONS

Treedy's patented 3D technology bridges online and in-store sales.

Treedy's gathers customers' morphology and provides it to retailers for use in sizing advice. The process is fun, convenient and instantaneous!

The resulting body models are an essential element for the future of design, production and the retail experience.

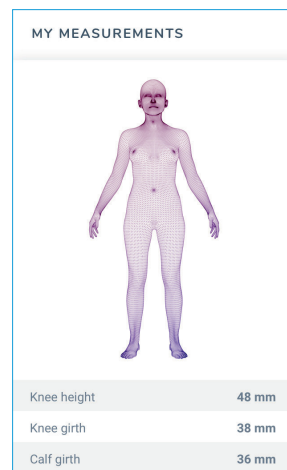
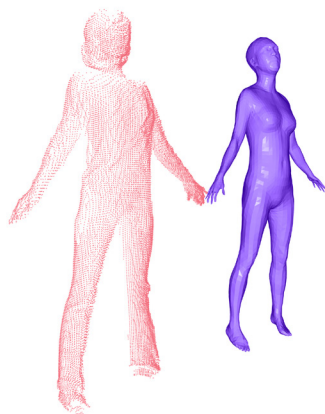
Treedy's technology is a key element to move towards a more sustainable fashion industry.

ADVANTAGES

Retailers will benefit from a streamlined sales process and upsell using consumer's morphological data to drive online traffic.

Brands will optimize sales with fewer returns of online orders, a novel and personalized in-store experience at flagship locations and regional consumer morphology analysis.

Consumers will benefit from a more satisfying shopping experience both online and in-store with increased efficiency and less time wasted on "bad fits".



Treedy's designs algorithms that solve real problems in fashion retail.

TREEDY'S UNIQUE TECHNOLOGY

Treedy's scanning systems yield state-of-the-art results, and have clear advantages over competitors in the emerging market of human body scanning.

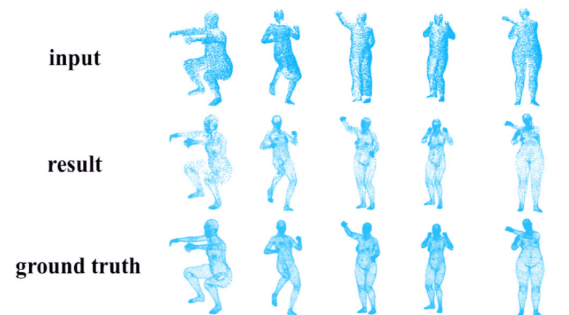
Treedy's R&D efforts and **state-of-the-art machine-learning research** have resulted in:

- a process that automatically defines and extracts standardized body measurements for any human morphology.
- the "Body Under Garments" algorithm which allows to **infer clothed users' biometrics under clothing**. This allows us to scan people without the need to remove any clothing, which permits a much smoother user experience compared to competitors, while retaining very high accuracy in measurements.
- an extremely computationally efficient solution : Treedy's DNN gives a prediction result for a single frame of input data in just 0.5 seconds.
- the ongoing development of a **fully "mobile-app"** version of our human body scanning solution exploiting the introduction of time-of-flight (ToF) 3D sensors in the latest generation of smartphones.

BODY UNDER GARMENTS

Early quantitative results with a single scan frame as input show that Treedy's already has very high accuracy with this method.

See in the table below the distance between the ground truth and the estimated output from our algorithm in an early demo; at worst our results are about 8mm in error.



		T-shirt, long pants	Football outfit	Long-sleeved skirt, long pants	Opening clothing	Dress
		precision in mm				
FEMALE ID	#1	5.30	5.33	5.39	5.35	5.47
	#2	5.88	5.84	5.8	5.88	5.86
	#3	5.72	5.68	5.81	5.92	5.86
	#4	5.63	5.45	5.74	5.57	5.57
	#5	6.38	6.53	6.67	5.98	6.49

TREEDY'S CUSTOMERS & TRACTION

Treedy's counts following companies amongst its customers: Zalando, Nike & Amazon.

11 scanners are currently operational and have been successfully used for more than 2 years.

Treedy's is actively deploying and developing solutions tailor-made for each customer's specific use case, and working on the tools of digital retail with a long-term perspective.

amazon

zalando



TREEDY'S TEAM



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