## PolyU startups' featured products showcased at Consumer Electronics Show 2025

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Featured Product	PolyU Start-up	Principal Investigator(s)	Image
Mobile Ankle-foot Exoneuromusculoskeleton	Thecon Technology	Dr Xiaoling HU	
	(HK) Limited	Associate Professor,	VG
(Consumer Electronics Show 2025 Innovation		Department of Biomedical	
Award)		Engineering, PolyU; Co-	
		founder, Thecon Technology	i) CES Introvation
The Mobile Ankle-foot Exoneuromusculoskeleton is the		(HK) Limited	2025
first device of its kind to combine the advantages of			
exoskeletons, soft pneumatic muscles, neuromuscular			Bas long Anti-
electrical stimulation and tactile sensory feedback into a			The state of the s
single, lightweight wearable system powered by a small rechargeable battery. This unique combination can			
effectively correct poststroke footdrop and foot			
inversion, which are common issues faced by stroke			
survivors. It is also easy to use by non- professionals for			
self-help telerehabilitation. The device is connected to			
the Internet of Things (IoT), which allows it to connect			
professionals and multiple poststroke users in different			
locations. This enables the efficient management of			
rehabilitation and motivates users to continue their			
training through incentive schemes, which, in turn,			
enhances the efficiency and effectiveness of			
rehabilitation and reduces the burden on professionals.			
By enabling remote and self-help telerehabilitation, it			
can also provide quality care to more stroke survivors			
who need it.			

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Seekr  (Consumer Electronics Show 2025 Innovation Award)  Seekr is a compact wearable aimed at being a loyal companion to the elderly and visually impaired population which provides real-time, intuitive services that help them achieve independence in life.	Vidi Labs Limited	Mr Turzo BOSE Director, Vidi Labs Limited	Wei Lub Limited III III II
These devices are designed for optimal comfort and adaptability, offering excellent stretchability and durability. Customisable and equipped with sensing and display functions, this technology allows seamless integration into sportswear prototypes.  The various applications include textile sensors which have been crafted with a focus on unmatched comfort, exceptional stretchability, and durability to endure rigorous washing cycles; a textile display device with a switch and a battery to enhance the visual and user experience aspects of textile electronics; a textile fitness tracker that integrates sportswear with an IMU, LED display, battery, and Bluetooth to create a unified system for monitoring training load during exercise; and a sports apparel system that integrates textile devices such as a temperature sensor, an accelerometer and LED display to track biomechanical and physiological data during exercise.		Dr Yingsi WU Postdoctoral Fellow, Department of Applied Biology and Chemical Technology, PolyU; Founder and Director, Easenory Technology Limited	Estenory Technology Limited Loss Journal of Lo

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GOOD Vision/Wellsees: Portable Corneal	GOOD Vision	Prof. Chea-su KEE	HONGU
Topographer  Astigmatism, which affects over half the world's population, has surged due to abnormal visual habits during the COVID-19 pandemic. This condition can cause blurred vision, asthenopia, headaches and even vision loss. Early detection and proactive care can mitigate these effects. This portable corneal topographer is a powerful, compact tool for early detection of astigmatism. It combines a high-resolution CCD camera, 32 Placido rings, and an AI-driven algorithm to accurately measure refractive power. This enables healthcare providers to quickly address refractive needs, ensuring timely interventions. The portability of the device allows for convenient eye-checks anywhere, promoting early detection of corneal abnormalities. The advanced AI system ensures measurements, instability. This simplifies diagnosis, integrates into broader astigmatism management and breaks down geographical barriers, making it a commercially viable solution for widespread vision care.	Technologies Co., Limited	Head and Professor, School of Optometry, PolyU; Deputy Director of CEVR; Co-founder, GOOD Vision Technologies Co., Limited/Wellsees Technologies Co., Ltd.	
IMU+ Collection  The IMU+ Collection is a revolutionary antiviral artificial leather and structural colour technology, which combines a luxurious feel with superior functionality through two key innovations. The IMU+® Protection Technology, an embedded antimicrobial system, creates positively charged layers throughout a material, not just as a surface coating. When pathogens make contact with the surface, their cell walls or envelopes are physically ruptured instantaneously, killing 99.99% of surface pathogens within two hours. This protection remains	Immune Materials Limited	Prof. Chris Kwan-yu LO Professor, Department of Logistics and Maritime Studies, PolyU; Co-founder, Immune Materials Limited  Prof. Chi-wai KAN Professor, School of Fashion and Textiles, PolyU; Co- founder, Immune Materials Limited	HONG KONG  HONG KONG  ALL  ALL  ALL  ALL  ALL  ALL  ALL  A

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effective even with surface wear, maintaining antiviral and antibacterial functions for over three years. The advanced anti-stain properties of the materials feature a unique structural colour-based whiteness (Whiteness Index Value: 90) that naturally resists yellowing, staining, and oil penetration. This is achieved without using bleach, dyes, or pigments, due to the material's tight, compact surface structure. The anti-stain properties make these products ideal for everyday use while maintaining their pristine appearance.			
LungRT Pro: Advanced Radiotherapy Support System  This project aims to enhance lung radiotherapy by automating the analysis of patient CT images and simplifying clinical procedures. With a few clicks, it identifies organs and generates lung ventilation and perfusion maps, providing a comprehensive visual representation of lung function. This streamlined process aids clinicians in making informed treatment decisions, improving patient outcomes. The system employs cutting-edge image processing algorithms and AI techniques to ensure high accuracy and consistency. It features a user-friendly interface, a powerful backend, and 3D visualisation capabilities. The system is designed to be compatible with major operating systems, reducing environmental impact with broad accessibility, making it a valuable tool in lung radiotherapy. The automation of manual tasks also reduces workload and minimises human error.		Prof. Jing CAI Head and Professor, Department of Health Technology and Informatics, PolyU; Technical advisor, InsightRT Limited	Disjoint Limited  Signal  Sign

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allcareAI: Smart Anti-Infection Mobile Dry Toilet  Unlike conventional commode chairs, the allcareAI smart anti-infection mobile dry toilet helps caretakers alleviate the daily hygiene and workload burden by eliminating the need to manually disinfect the toilet seat and empty the waste before and after each use. Leveraging its patented all-in-one toilet seat wrapping and bowl sealing automation technology, both the toilet seat and bowl are automatically wrapped and sealed by a disposable toilet seat bag using environmentally friendly material, ensuring hygiene and dignity to both caretakers and care recipients. The waterless and installation-free design enables it to be deployed at any time, in any community household or facility. Integrated with a variety of sensors and touchscreens, it digitises and visualises user and device status for easy health and IoT management.	PREN Limited	Mr Phil WOO PolyU outstanding alumnus from the Faculty of Humanities; Co-founder, PREN Limited	Construction Links and Construction Construc
IoT-based Sensing System for Construction-induced Vibration  The system integrates IoT technology combined with advanced vibration research to provide a comprehensive solution for monitoring construction-induced vibrations and assessing their impact. This all-in-one system features an IoT sensing node, wireless data transmission, customised algorithms and a cloud-based platform. It not only measures vibrations but also provides real-time monitoring results, thus helping to mitigate damage risks and enhance construction safety. This innovative monitoring solution is tailored to meet the diverse needs of customers in the construction industry and has the potential to bolster public confidence in construction projects significantly.	SHAKE Limited	Dr Qiuhan MENG Postdoctoral Fellow, Department of Civil and Environmental Engineering, PolyU; Director, SHAKE Limited	SHAKE Limited  COMPANY SHAKES  HEAVES