Breaking Barriers: How an AI Avatar is Transforming Communication

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Silence Speaks' AI avatar is bridging communication gaps for Deaf communities worldwide. More than just technology, it serves as a vital tool for accessibility, enabling seamless interaction and breaking down barriers in communication.

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In a major leap forward for inclusive technology, Silence Speaks, a UK-based company collaborating with Transport for London (TfL), has unveiled an AI-powered sign language avatar set to transform communication for Deaf communities globally. What makes this innovation exceptional is the inclusive, co-designed approach: Deaf software engineers have played a central role in its creation, ensuring authenticity and accessibility are at its core.

The company's flagship product is an AI-driven avatar that translates text into British Sign Language (BSL) with remarkable accuracy. Trained on comprehensive datasets covering regional dialects, contextual language, and emotional tone, the avatar delivers accurate and emotionally expressive translations. Integrated captioning ensures accessibility for deaf individuals who prefer or rely on written text rather than sign language—expanding the platform's reach and utility.

With over 151,000 BSL users in the UK and millions of sign language users worldwide—representing a diverse array of regional and national sign languages—the avatar addresses a critical need for inclusive communication on a global scale. This highlights Silence Speaks' dedication to empowering all sign language communities, regardless of the specific language they use. Silence Speaks is actively integrating its technology into sectors where communication barriers are particularly stark—healthcare, education, retail, and public transport—to ensure no one is left behind.

"This isn't just technology—it's a lifeline," said Pavan Madduru, CEO of Silence Speaks and former Vodaphone AI pioneer with two decades of experience in communications technology. "Our AI doesn't just translate words; it conveys intent and emotion. With Deaf engineers involved in the design, we're building something that resonates."

Silence Speaks has already earned national recognition, including the UK Startup Awards' "Startup for Good" title and a prestigious UK Government Innovate UK Smart Grant.

Former Secretary of State for Science, Innovation, and Technology Joins as Chair of the Board

Rt Hon Chloe Smith, former Secretary of State for Science, Innovation, and Technology, led the legislation that recognised British Sign Language in UK law in 2022. Her appointment, as Chair, underscores Silence Speaks' commitment to blending policy, innovation, and social good. Smith has been a vocal advocate for British Sign Language (BSL), collaborating with organisations like the British Deaf Association (BDA), and serving as trustee of the national hearing loss charity RNID.

"Technology must serve everyone—and I'm excited to support new ways to communicate for Deaf and hearing communities around the globe. " Smith said. "Silence Speaks isn't just building a product; it's redefining inclusivity in the digital age. The involvement of Deaf engineers in the development process is a testament to their dedication to authentic representation."

Her work at the Department for Work and Pensions (DWP) advancing disability-inclusive employment, coupled with her expertise in policy and tech, aligns seamlessly with the company's mission to empower Deaf professionals.

Top tech investor and finance leader join Silence Speaks Board

Dr. John Lee Allen, Managing Partner at RYSE Asset Management and influential tech investor, joins the

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board to drive strategic partnerships and international expansion, drawing on his background as an NHS doctor and audiology specialist.

Leveraging his technical background as a surgeon and engineer, he has helped companies to secure multimillion-dollar investments and gain entry into Silicon Valley's renowned accelerator, Y Combinator. Notably, he has led investor partnerships with the largest digital health accelerator in Europe, DigitalHealth. London, and with industry giants Novartis, Medtronic, and the NHS, driving the selection and rapid scaling of innovative early-stage companies that are transforming lives.

Dr. Allen brings over 20 years of experience at the intersection of science, technology, and investment. Based at Europe’s largest biomedical campus, he serves as an NHS Board Governor and Fellow at the University of Cambridge.

"As a doctor, I’ve seen firsthand how silence can isolate—but I’ve also seen how the smallest act of communication can restore dignity. Silence Speaks’ is more than innovation; it restores human connection," said Dr. Allen.

Stuart-Smith brings a deep understanding of business and finance to the Board, He has more than 25 years’ experience in senior management and strategy roles in capital

markets and the shipping industry and is a former Executive Director at the Baltic Exchange where he set up and ran its regulated subsidiary from 2009-17. As Managing Partner of a specialist sustainability consultancy over the past 6 years, he has advised companies across sectors on a wide range of environmental, social and governance issues, including in support of a new global standard for measuring biodiversity impacts. Experiencing significant hearing loss himself, Stuart-Smith is delighted to be joining the Board of Silence Speaks and of having the opportunity of helping to facilitate the increased use of sign language throughout society.

Empowering Communication: Silence Speaks’ Global Expansion

Silence Speaks plans to expand its avatar’s capabilities to International Sign and regional languages by 2026, targeting markets in the EU, US, and Asia. Upcoming B2B2C solutions will focus on sectors like retail, transport, and healthcare—areas where accessibility barriers remain acute.

However, challenges persist. Ensuring accuracy across dialects and overcoming hardware limitations in underserved areas are ongoing priorities. To address these, the company is co-designing algorithms with deaf communities and linguists, avoiding "tech-solutionism" by prioritising user input.

Importantly, the platform continues to refine its captioning functionality, ensuring that all Deaf users—whether they use sign language or not—can benefit from its tools.

The involvement of Deaf software engineers in this process has been pivotal. Their insights have shaped everything from the avatar’s gestures to its ability to convey subtle emotional cues, ensuring the technology feels intuitive and authentic to users.

Why This Matters

Silence Speaks is part of a growing wave of companies using AI to tackle systemic inequities to drive the accessibility revolution.

“This is about dignity and tech for good,” added CEO Madduru. “We’re not just using AI to replicate language; we’re using it to humanise connection.” With Rt Hon Chloe Smith’s policy leadership, Dr. John Lee Allen’s technology vision, and Paul Stuart-Smith’s commercial acumen—Silence Speaks is poised to bridge centuries-old communication divides by providing a bridge to a new era of accessibility and inclusiveness.

Key Stats

· 151,000+ BSL users in the UK

· 85% of Deaf professionals report workplace exclusion (RNID, 2023)

· Silence Speaks' product is co-designed by Deaf software engineers, ensuring representation

For demos or partnerships, visit silencespeaks.io or email contact@silencespeaks.io.

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