

BITS Goa, German team develop 'emotion-aware' AI

Researchers train digital assistants to recognise and respond to vocal cues like tone and pitch

Team Herald

PANJIM: In a pioneering Indo-German research collaboration, scientists are working to teach machines not just to hear words, but to understand human emotions. The project, led by Prof Dr Akshay Madhav Deshmukh at TU Bergakademie Freiberg and co-investigated by Dr Manideep Mukherjee of BITS Pilani, K K Birla Goa Campus, seeks to transform how digital assistants interact with users.

The initiative, named "EIVA: Exploring Emotion-Aware Interaction Design in Voice-Based Intelligent User Interfaces", aims to enable artificial intelligence systems to recognise

MAKING AI EMPATHIC

- Scientists from BITS Pilani Goa and TU Bergakademie Freiberg are partnering to develop emotion-aware AI

- A research initiative focused on "Exploring Emotion-Aware Interaction Design" for voice-based interfaces

- AI is being trained to recognise feelings like happiness, sadness and

anger using vocal cues such as tone, pitch, and rhythm

- The system adapts its output—responding gently to distressed users and warmly to joyful ones

- Combines advanced deep-learning models with interaction design to move beyond the neutral, robotic tone of current digital assistants

emotions such as happiness, sadness, and anger through vocal cues including tone, pitch, and rhythm. Once an emotion is detected, the AI adapts its response—speak-

ing gently to a distressed user or responding warmly to a joyful one.

"Human communication is never emotionally neutral," said Prof Deshmukh.

"Our voices carry traces of our inner world. Yet machines are trained to ignore this completely. In the world of voice interfaces, the best designs are those that don't just respond, but truly listen to the human heart."

Dr Mukherjee added, "When technology listens with sensitivity, it becomes more than a tool—it becomes a companion."

Unlike current digital assistants that respond in the same neutral tone regardless of a user's emotional state, EIVA represents a step toward creating AI that interacts with empathy and awareness.

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BITS GOA, GERMAN TEAM DEVELOP 'EMOTION-AWARE' AI

The project combines advanced deep-learning models with innovative interaction design to make human-machine communication more intuitive, personalised, and emotionally intelligent.

The collaboration underscores a broader vision for AI: one that does not merely compute faster but listens more wisely, bridging the gap between human emotions and artificial intelligence.