# AI model aims to decode dolphin communication



A groundbreaking development in understanding dolphin communication is on the horizon, thanks to a new artificial intelligence model created by Google. This innovative model, known as DolphinGemma, is designed to analyse the vast array of dolphin sounds, including clicks, whistles, and vocalisations. The dataset comprises recordings from several years of research conducted by the Wild Dolphin Project, suggesting that humans could soon decipher the complexities of dolphin communication.

Dr Denize Herzing, the founder and research director of the Wild Dolphin Project, shared insights on the potential of the AI model in an interview with The Telegraph. She noted the ongoing mystery regarding whether dolphins possess a form of language, despite their intelligence indicated by self-recognition and tool use. "We do not know if animals have words," she stated, highlighting the significance of exploring dolphin sounds through AI to uncover possible linguistic patterns that humans might not easily discern. Her aspiration is clear: "The goal would someday be to 'speak dolphin'."

The AI model's purpose is to sift through various sounds that are correlated with specific behaviours, potentially revealing sequences that suggest a structured form of communication. Dr Thas Starner, a scientist at Google DeepMind, affirmed that the model is integral to identifying hidden structures and meanings in dolphin sounds, a task that traditionally requires significant manual effort. He remarked, "We're just beginning to understand the patterns within the sounds."

Recent findings have shown that dolphins not only have unique signature whistles used for identification but also exhibit regional accents, much like humans. These signature whistles, distinct to each dolphin, have exhibited variations influenced by environmental factors and community size, as revealed by a study led by Gabriella La Manna from the University of Sassari in Italy. The team analysed 188 hours of dolphin vocalisations across six populations in the Mediterranean Sea, identifying 168 unique signature whistles in the process. Their research indicated that dolphins from areas with seagrass produce higher-pitched and shorter whistles compared to those inhabiting muddy environments.

The interplay of habitat and social structure was further illuminated when it was observed that smaller dolphin groups, like those in the Gulf of Corinth, exhibited signature whistles with more rapid changes in pitch than their larger counterparts.

In another noteworthy contribution to the study of dolphin communication, Dr Arik Kershenbaum, an animal communications expert from the University of Cambridge, reported identifying specific meanings in dolphin sounds. His research revealed a repeated pattern of a particular whistle, hypothesising that it could correspond to a "signature whistle" akin to a dolphin's name. This finding suggests that these specific signals might serve as greetings between dolphins, although ambiguities remain regarding the full cognitive interpretation of these sounds.

Despite these advances, the landscape of dolphin communication remains complex, with many nuances still to be explored. Dr Kershenbaum acknowledged the challenges in establishing a comprehensive understanding of dolphin language, stating, "With dolphins, it is really hard because we don't even know the framework of what their language would be if they had one." His observations indicate that while some whistles appear distinct, their implications for cognitive recognition among dolphins remain unclear.

As researchers continue to delve into the intricacies of dolphin communication, the integration of artificial intelligence stands to play a pivotal role in bridging the gap between human understanding and animal linguistics, potentially unlocking the secrets of dolphin interactions in the near future.

Source: [Noah Wire Services](https://www.noahwire.com)

## References

* <https://blog.google/technology/ai/dolphingemma/> - This article explains the development of DolphinGemma, a Google AI model designed to analyze dolphin vocalizations and potentially communicate with them, highlighting its potential in understanding dolphin communication patterns.
* <https://techcrunch.com/2025/04/14/googles-newest-ai-model-is-designed-to-help-study-dolphin-speech/> - TechCrunch discusses how DolphinGemma is created by Google to interpret dolphin communications, collaborating with the Wild Dolphin Project and utilizing Pixel phones for efficient analysis.
* <https://www.zdnet.com/article/google-is-talking-to-dolphins-using-pixel-phones-and-ai-and-the-video-is-delightful/> - Zdnet details how Google's AI model, DolphinGemma, is used to understand dolphin language and potentially communicate with them, leveraging Pixel phones to process dolphin sounds in real-time.
* <https://www.youtube.com/watch?v=1bgL4b7VT8M> - This YouTube video discusses the potential of DolphinGemma in deciphering dolphin language, highlighting Dr. Denise Herzing's work and the model's ability to analyze dolphin vocalizations.
* <https://theoutpost.ai/news-story/google-s-dolphin-gemma-ai-model-aims-to-decode-dolphin-communication-14339/> - The Outpost explains how DolphinGemma aims to decode dolphin communication by analyzing patterns in their sounds, built on Google's open Gemma model series, and its potential for real-time interaction with dolphins.