LS23-024 - Decoding elephant communication with AI

Zusammenfassung

To secure elephant survival in an increasingly human-dominated world, we must first understand their behavior, thinking, and communication patterns. Elephants communicate significantly through vocalizations. They send relevant information via their calls, yet each one is unique, with variances in numerous auditory aspects. Working with massive data sets of vocalizations that people cannot easily evaluate manually will be required, because it is unknown which auditory patterns encode critical information. The main question is whether Artificial Intelligence (AI) can aid in the decoding of elephant communication.
The highest level of verification is provided by combining innovative models based on machine learning and artificial intelligence to decode elephant communication patterns and testing our findings not just in the lab but also on elephants in the wild. We, a group of biologists and computer scientists, will take on the challenge of decoding elephant language.

Wissenschaftliche Disziplinen:
Behavioural biology (34%) | Practical computer science (33%) | Acoustics (33%)

Keywords:
elephant communication, call repertoire, sound production, sound recognition, sound synthesises, call classification, sound generator, deep neural networks, machine learning

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https://wwtf.at/funding/programmes/ls/LS23-024/