

Time-consuming task of conserving Jane Goodall Institute field notes gets a boost from AI

An ASU team is transforming decades of handwritten data on chimpanzees into a searchable database

By Joycelyn Muñoz, ASU News
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Arizona State University is continuing the legacy of scientist, conservationist and ethologist Jane Goodall by bringing decades of research into the digital age using AI.

In March 2022, the [Jane Goodall Institute](#) started a collaboration with ASU primatologist [Ian Gilby](#) to host over 60 years of Gombe research data at the [Institute of Human Origins](#). The archive contains handwritten and digital materials that include daily observations of wild chimpanzees in Gombe National Park, related ecological data and numerous artifacts. The decades of paper are housed in fire- and waterproof cabinets, all funded by generous donors.

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Now, a team of ASU faculty, student researchers and AI engineers are exploring ways to transform the handwritten field notes from Tanzania into searchable, analyzable digital data files. This effort will complement and contribute to the new [Gombe AI Research Platform](#), under development by

the Jane Goodall Institute.

“There’s a lot of value to these data,” said Gilby, a research scientist at the Institute of Human Origins and an associate professor at the School of Human Evolution and Social Change.

“They help us understand more about human origins, and more about the complex nature of chimpanzee behavior and ecology. A better understanding of their biology and behavior gives a better chance of protecting this iconic endangered species,” Gilby said.

Translating the data from paper sheets to digital records, however, has proved time-intensive. That’s where Gilby turned to [ASU Enterprise Technology](#)’s AI Acceleration team for support.

Accelerating conservation research with AI

For over six decades, the team at the Jane Goodall Institute’s Gombe Stream Research Center in Tanzania has collected daily data records on a checkbox-style document called a Tiki sheet. The researchers follow a single, “focal” chimpanzee all day and record data points that include the arrival and departure times of other chimpanzees into the focal chimpanzee’s subgroup, feeding bouts and encounters with other species.

Over the years, hundreds of thousands of records have been collected and are stored in the Jane Goodall Institute’s Gombe Research Archive on ASU’s Tempe campus.

A team of student researchers has been manually entering the information collected in the sheets into the project’s database. In fall 2025, Gilby turned to the university’s AI Acceleration team for support.

Senior AI development engineer Krishna Sriharsha Gundu, part of the AI Acceleration team at ASU, took on the challenge.

He worked toward a solution that would combine machine learning with imaging techniques called “vision” to review the tracking sheet and analyze the data on the page. The team coined the project “Gombe AI.”

Taking a scanned image of the Tiki sheet, the computer vision software straightens the image and extracts the data points. The software is then able to digitize the image into simple rows and columns on Excel spreadsheets. These data will be incorporated into the project’s relational database for analysis.

“We combined this traditional AI technology with newer large language models to review and analyze the handwritten notes written in the margins on the sheets,” Gundu said.

Gundu developed the code needed to extract data from the Tiki sheets, data which student researcher and data science undergraduate Joesh Jhaj then takes and focuses on the project’s interpretation and translation.

“Computer vision translates an image that the computer can then pick up on,” Jhaj said. “The use of generative AI in this project is to read and translate the handwriting.”

Building on Gundu's computer-vision preprocessing, Jhaj wrote the translation and interpretation code that turns contextual marks into structured research data, using GPT's API to verify unclear handwriting or ambiguous symbols when needed.

After the data is digitized, students who work with the Gombe chimpanzee archive will check and compare the results against the original handwritten data sheets.

Jhaj is in the early stages of working with the new Gombe AI solution. The team hopes the tool will improve accuracy in its analyses and be less time-consuming for data entry. The tool will also enable researchers to more effectively connect, manage and update the Tiki sheet data with the other handwritten protocols, video and geospatial data digitized as part of the Gombe AI Research Platform.

"It's awesome to be able to work with teams across the university and develop unique AI solutions that advance research like this," Gundu said.

This story originally appeared on [ASU News](#).

Main image



(From left) ASU's Ian Gilby, Joesh Jhaj and Krishna Sriharsha Gundu review the handwritten data sheets that they are working to digitize using AI. Photo by Tabbs Mosier/ASU Enterprise Technology

Text image(s)



Ethologist and conservationist Jane Goodall and ASU President Michael Crow shake hands during a meeting held at ASU in 2023. ASU photo