

Sijia Shen

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Education

M.S. in Ecology

2022 – Present

Beijing Normal University(BNU), Beijing, China

- **GPA:** 3.7/4.0
- **Thesis Topic:** Applying Machine Learning to Predict Estrus Peak and Mate Choice in Female Giant Pandas Based on Their Vocalizations.
- **Supervisor:** Dingzhen Liu

B.S. in Wildlife and Nature Reserve Management

2018 – 2022

Beijing Forestry University(BFU), Beijing, China

- **GPA:** 90.64/100
- **Thesis Topic:** Asian Elephants' Discrimination Between Rumbles and Low-frequency Noise of Drones

Research Project

Giant Panda's Ability to Discriminate Human Speech

CCRCGP, Wolong, Sichuan, China

Jul. 2023 – Jul. 2024

- **Research Objective:** Investigate Giant Pandas' auditory patterns in response to human speech.
- **My Role:** Wrote the project proposal, designed and conducted the experiments, analyzed panda behavior data, and drafted the project paper.
- **Key Results:** We demonstrated that pandas can distinguish between their keepers and strangers. Furthermore, we found that, despite the pandas' familiarity with the speaker, the accent in human speech serves as a key acoustic cue influencing their perception.
- **Methods Used:** Sound playback, animal behavior recording and observation, statistical analysis (General Linear Model).
- **Paper** (In preparation): Giant Pandas Discriminate Human Speech Based on Familiarity and Accent.
- **Funding:** MOE Key Laboratory for Biodiversity Science and Ecological Engineering, Beijing, China (100k RMB).

The Impact of Drone Noise on Captive Asian elephant's Behavior

Beijing Zoo, Beijing, China

Apr. 2022 – Present

- **Research Objective:** Examine the effects of drone noise on the behavior of captive Asian elephants.
- **My Role:** Designed and conducted the experiments, recorded and observed elephants' behavior, analyzed data, and wrote the project report.
- **Key Results:** Preliminary findings suggest that captive Asian elephants at Beijing Zoo pay little attention to low-frequency drone noise playbacks. The next step is to evaluate whether drone noise influences the reception of elephant's low-frequency calls(rumbles) by masking them.
- **Methods Used:** Sound playback, animal behavior recording and observation, statistical analysis (Mann-Whitney U test, General Linear Model).
- **Funded by** Beijing Zoo Administration Department (50k RMB)

Awards

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| • First-class Scholarship, BFU (10,000 RMB, Top 3%) | 2018-2020 |
| • Second-class Scholarship, BFU (8,000 RMB, Top 10%) | 2021 |
| • First-class Scholarship, BNU (12,000 RMB, Top 3%) | 2022-2024 |
| • Outstanding cadres of Student Association | 2021 |

Skills

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- **R:** Data Analysis & Visualization
 - **Python:** Audio Signal Processing & Modeling
 - **English Proficiency:** IELTS Overall 7 (Listening: 7.0, Reading: 8.5, Writing: 6.0, Speaking: 6.0) - Test Date: November 2024