# Annotated bibliography

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## Abstract

This paper provides a comprehensive examination of the utilization of Internet of Things (IoT) devices in wildlife management and tracking, their evolutionary trajectory, and practical implementation in data acquisition. Central to the discussion are key components of IoT networks, including Sigfox, Wi-Fi-enabled devices, and IoT-based wireless sensor networks, each analyzed for their role and efficacy. Communication modalities within IoT frameworks, coupled with an evaluation of protocol performance are evaluated.

Furthermore, this seminar also addresses challenges inherent in wildlife data collection methodologies, such as memory constraints, battery life, transmission range and rate, and security vulnerabilities within IoT ecosystems. By delving into potential solutions and technological advancements, this paper aims to contribute to the refinement of wildlife monitoring practices, fostering a more robust and effective approach to conservation efforts.

***Keywords:*** IoT, networking, Wi-Fi, data transmission, data collection, animal trackers, Sigfox, WildFi

## 1 Discussion of sources

I will be using a multitude of sources for this seminar to ensure that the reader can gain a comprehensive knowledge of the various ways IoT and WiFi enabled animal sensors are being used and how they work. Some sources may only be used for a few examples for the applications of IoT devices, while others may be used more thoroughly to explain more complex material like the networking and protocols that are being used.

### 1.1 Sources I expect to use (and how)

I plan to use the following sources:

- I expect [1] to be two of my main sources, and I'm still looking for one more "core" paper to build on. [**?** ] covers *this* and *that*, which is important for *the other*. [**?** ] takes a very different approach which appears to take better advantage of some new developments in cloud infrastructure. One area where a new paper would be helpful would be in better connecting and comparing these two techniques.

### 1.2 Sources I doubt I'll use

## References

[1] T. A. Wild, L. van Schalkwyk, P. Viljoen, G. Heine, N. Richter, B. Vorneweg, J. C. Koblitz, D. K. Dechmann, W. Rogers, J. Partecke, et al. A multi-species evaluation of digital wildlife monitoring using the sigfox iot network. *Animal Biotelemetry*, 11(1):1–17, 2023.