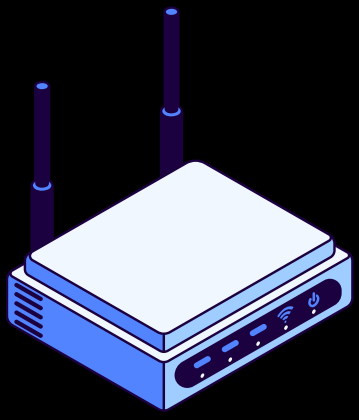

WiFi Sensing Intrusion Detection

Project proposal

The Big Idea 💡

Imagine using existing WIFI infrastructure to detect intrusions! Instead of relying solely on cameras and door sensors, we can analyze WIFI signal patterns to identify unusual activity within a space. Think of it as a **silent, always-on security system** leveraging the WIFI we already have.

Project Objectives 🎯

- **Develop** a Wi-Fi sensing system.
- **Detect** movement using signal changes.
- **Identify** potential intrusions.
- **Integrate** with existing security measures.

Our main goal is to create a proof-of-concept system that demonstrates the feasibility of WiFi-based intrusion detection. This includes building the necessary software, collecting and analyzing Wi-Fi data, and testing the system in a real-world environment. Ultimately, we aim to provide an additional layer of security, enhancing existing measures with minimal overhead.

Key Points & Benefits ✨

- **Cost-effective:** Uses existing infrastructure.
- **Non-intrusive:** Works passively in the background.
- **Wide coverage:** Leverages Wi-Fi range.
- **Early detection:** Potential to identify threats before they escalate.

The beauty of this approach is its simplicity and cost-effectiveness. By repurposing existing Wi-Fi networks, we can create a security system that is both affordable and easy to deploy. Moreover, because it operates passively, it doesn't require users to wear or carry any special devices. This technology offers a proactive approach to security, potentially detecting intrusions early on and minimizing potential damage.