Radar-based Material Classification

The work focuses on radar-based material classification. Due to the rapid development of autonomous driving technology, drones, home robots, and various smart devices in recent years, material sensing has received more attention. Millimeter-wave radar has been widely installed on these platforms due to its low price and robustness in harsh environments. Therefore, in this work, we will study methods for classifying some common indoor materials using millimeter wave radar signals.

In this work, we will collect radar signals from some common indoor materials such as wood, metal, glass, etc. After obtaining the required features through radar signal processing methods, we will use some machine learning algorithms to classify the materials.

Prerequisites

Programming in Python

Knowledge about Machine Learning

Knowledge about signal processing, particularly on radar signal processing

Contact

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(Please attach your CV and transcript)

Advisors

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