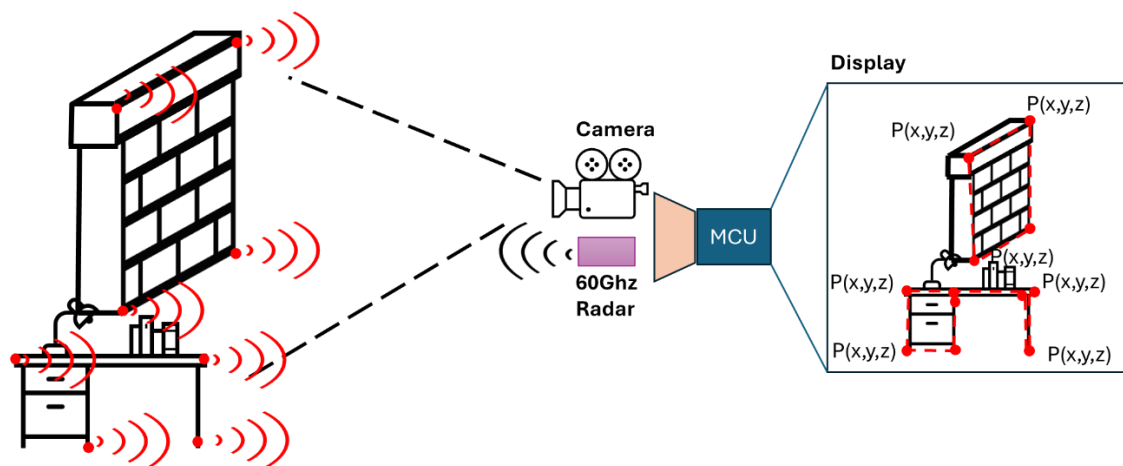# Radar-Camera-Fusion

In this project, the student **will contribute to the development of a fusion algorithm for overlaying/fusing radar data with a standard camera image**. The goal is to create an interface to synchronize radar data with camera data and, in a further step, to fuse the most significant radar data into a corresponding image. The point clouds of the radar and data images are to be compressed into a 3-4-point surface object system (vector system) to reduce the computational effort required for subsequent processes. The system should also be able to accurately measure the distance on a moving object, e.g., drones, autonomous (RC) cars, and transmit it to a backend for further analysis.

A 60GHz radar from Infineon (BGT60LTR) and a low-cost camera are to be used for this purpose. The student should assess which algorithm can be used to reduce the computational effort for the combined recognition of contours and surfaces [1&2].

Radar -Camera fusion [Figure by Elisei Ember]

Thesis Type: Master Thesis / Bachelor Thesis / Seminar / Project

Goal and Tasks:
- Development of a radar-camera synchronization platform
- Forwarding data to backend for collecting runtime data.
- Merging radar data with image data for building object surface recognition.

Recommended Prior Knowledge:
- Basic programming skills, such as Python, C, or C++.
- Experience in embedded systems and video vision.

Start: a.s.a.p.

Duration: 6-12 months (1 Persons)

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