



All-Purpose Security System

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Current Progress:

- Finished setting up the hardware.
- Successfully connected Raspberry PI to remote server
- Decided on the protocol for secure communication and video stream.
- Training neural network for facial recognition.

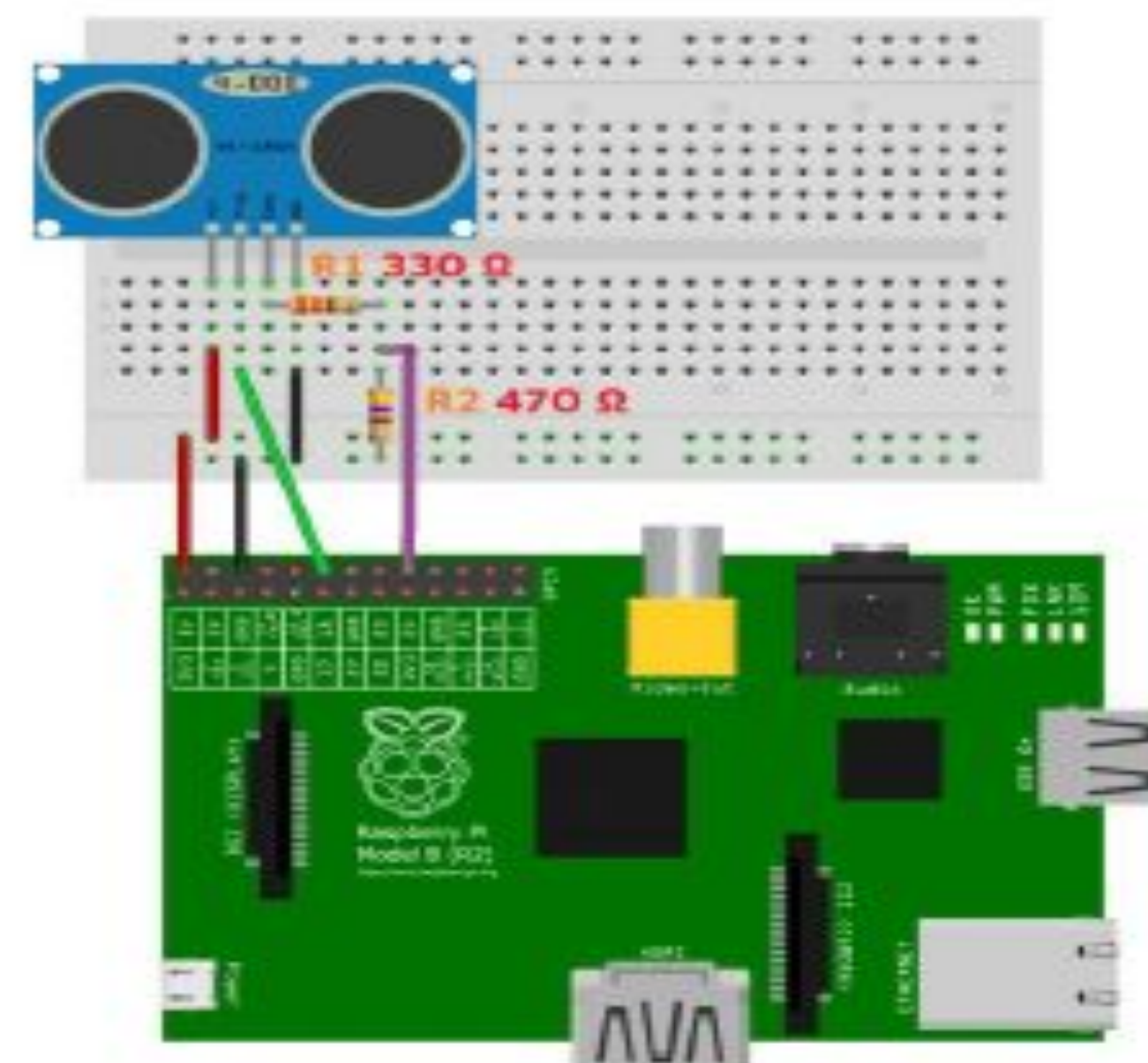


Fig. 2: RPI motion sensor circuitry.

Technical Goals:

The project should employ separate endpoints to improve usability. Sensor input should be gathered by the RPI. The resulting data should be sent to a server via a customized back-end and a processed result should be outputted to a web-based UI.

About the Project:

The all-purpose security system is an RPI-based security system that utilizes a sensor array, a facial detection camera with video and picture capturing ability, a door lock motor, a web server with a neural network backend, and a user interface web frontend for an effective user experience.

Expected Outcomes:

- Effective Facial Authentication Module
- User friendly control interface on both PC and mobile phones.
- Real-time video monitoring and recording
- Reliable communication and system security
- Convenient door locking mechanism

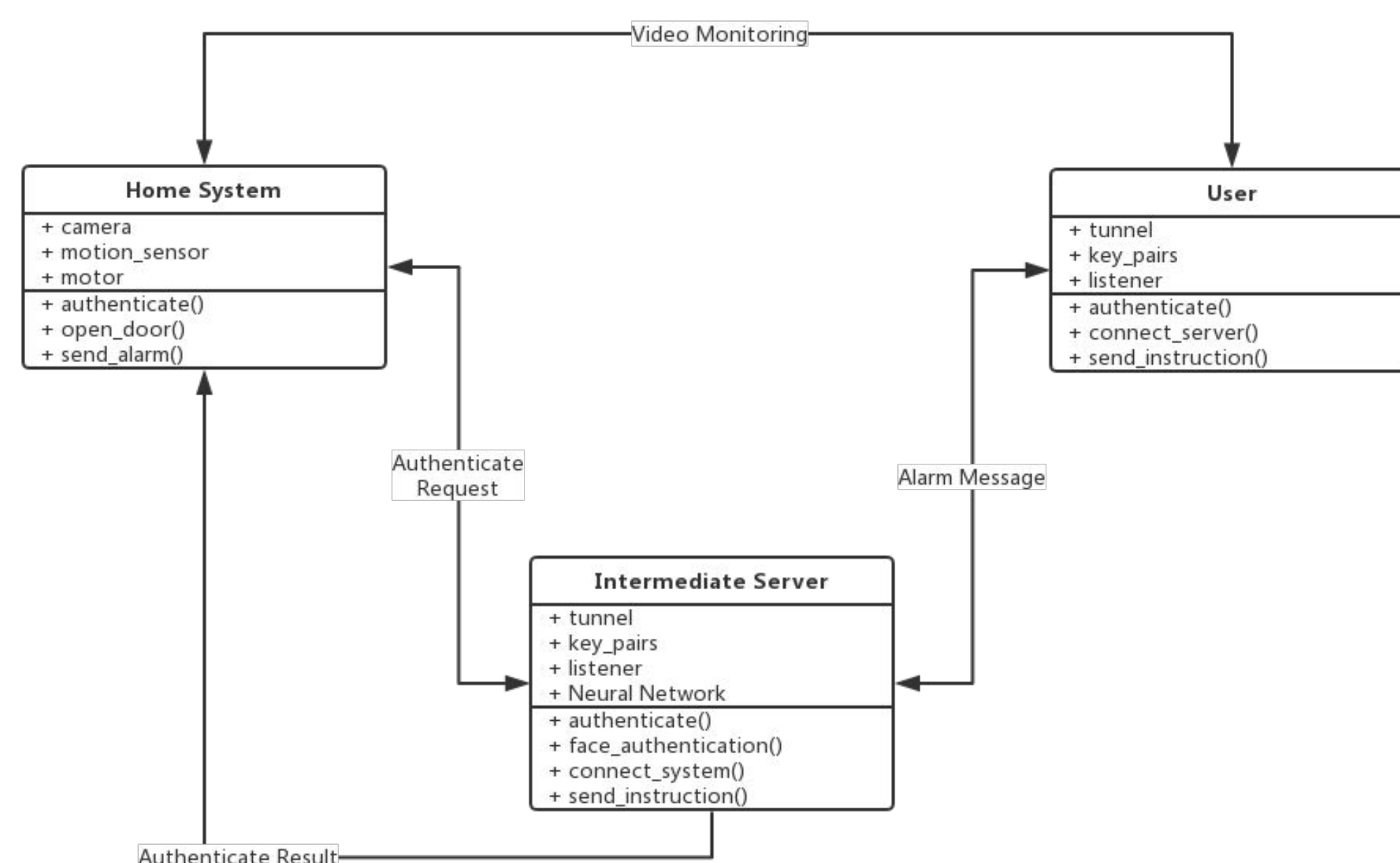


Fig. 1: Design of connections and interactions between the software, the hardware, and the user.

