

Voice Controlled Personal Assistant Using Arduino And Bluetooth

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Abstract: *Voice-controlled systems are transforming home automation by offering contactless operation and increased accessibility. This project proposes a cost-effective, offline voice-controlled personal assistant using Arduino Uno and the HC-05 Bluetooth module. By employing a mobile voice recognition app, users can transmit commands to an Arduino-based controller, which activates or deactivates connected appliances like lights and fans via relays.*

Unlike internet-dependent solutions, this project focuses on Bluetooth-based command transmission, eliminating the need for cloud processing. The system enhances user convenience, especially for elderly and disabled individuals, and promotes smarter, localized automation in homes or small offices. It also serves as an educational platform for learning embedded systems and wireless communication..

Keywords: Arduino Uno, HC-05 Bluetooth, Relay Module, Voice Command, Home Automation

