

Project ID: 2025143

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Title: Robotic Arm for Handheld Device Reading - student proposed

Motivation: Prolonged use of mobile devices often leads to poor posture, neck strain, and visual fatigue. Existing stands are either fixed-angle or manually adjustable, failing to address real-time ergonomic needs. This project is motivated by the demand for an adaptive, user-friendly solution to support healthier device interaction.

Goal: The goal of this project is to design a system that enables dynamic and ergonomic positioning of smartphones and tablets through an intelligent robotic arm and wireless remote interface.

Brief Description: The project will focus on developing a robotic arm stand capable of adjusting device position to maintain ergonomic viewing angles. A Bluetooth-based remote controller will allow users to interact with mobile devices without direct touch. The system will integrate motorized adjustment of the stand with user input to support flexible operation.

Anticipated Outcome: A working prototype of a smart robotic arm stand with Bluetooth remote control, capable of providing ergonomic positioning and hands-free operation for smartphones and tablets.