Phase & Task	Details / Milestones	Deliverables / Outcomes	# Start Week	# End Week	⊖ Status	Notes
Project Initiation & Planning	- Define project scope and objectives - Research hardware/software requir - Create initial UI sketches and parts	Project brief, requirements document, preliminary U	1	2	In Progress	Requirements document
Material Procurement & Hardware Desi	- Order components and 3D print cha - Finalize mechanical design - Update wiring diagrams (include re	Procured components, assembled 3D printed parts	3	4	Not Started	-
Arduino Firmware Development & Initia	- Develop baseline firmware for basi - Set up Android Studio and integrate	Basic firmware (movement & sensor functions), pr	5	6	Not Started	-
Expanded Firmware & App Level Integr	- Add gripper control functions and A - Enhance app UI with level-based bl - Integrate Bluetooth communication	Firmware with gripper and autonomous routines, a	7	8	Not Started	-
Integration & System Testing	- Integrate hardware with firmware a - Test each programming level (basic - Calibrate motors, sensors, and PID	Fully integrated, calibrated robot; documented test	9	10	Not Started	-
Documentation & Educational Content	- Create comprehensive project repo - Develop user manual, educator guid - Incorporate gamification and progr	Detailed project documentation, user/educator guid	11	12	Not Started	-
Final Presentation & Wrap-Up	- Rehearse final presentation and de - Prepare slides and final demo - Final project review and adjustmen	Final presentation, polished demo, complete projec	13	14	Not Started	-