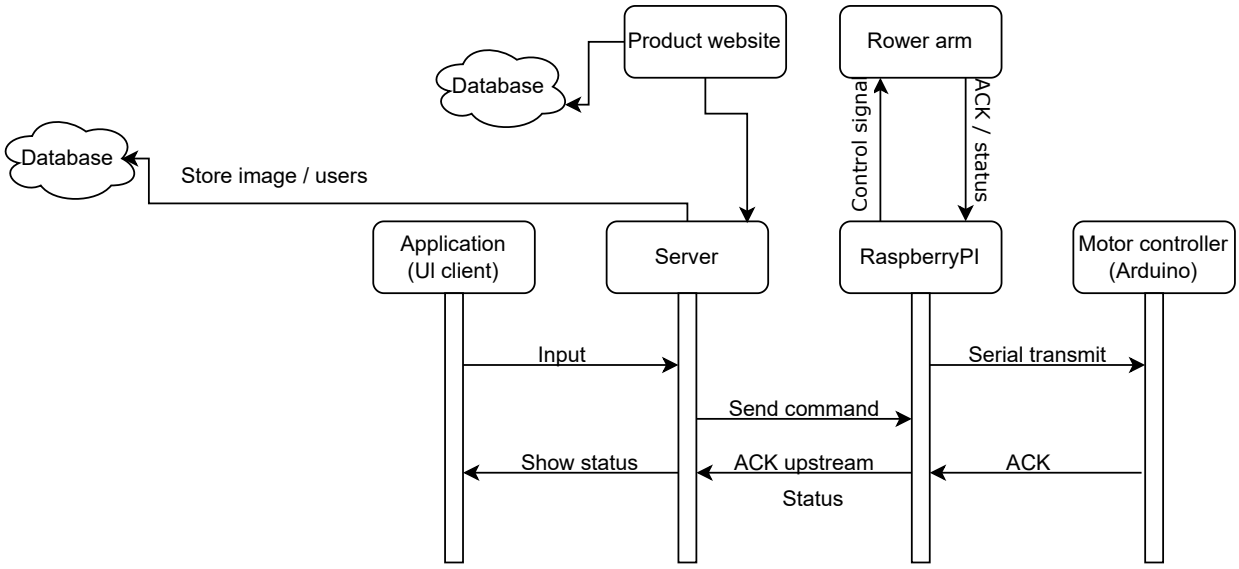

Application	Server	Raspberry PI
Role: Client / User Interface Receives user input (steering, camera) Displays system feedback Sends JSON commands to the server	Role: Central router, validator and proxy Handles user authentication and session control Validates and logs incoming commands Routes messages to the correct rover/user Communicates with the database	Role: Communication bridge and local controller Receives WebSocket messages from the server Converts commands to serial for Arduino Sends/receives ACKs Controls the rover arm directly Interacts with onboard camera module (pictures & livestream)

Database	Rower arm	Motor controller (Arduino)
Role: Storage Stores images, logs, and metadata Accessed exclusively via the server	Role: Mechanical manipulator Executes physical actions (e.g., grip, rotate) Receives control signals from Raspberry Pi Sends ACK or status back to Raspberry Pi	Role: Command executor Controls motors (direction, speed) and spotlights Sends status (battery)

Product website
Role: Product showcase and contact platform Displays TerraX9 as a product Includes contact details and booking form Accessible to external users