Medical Cart with Powered Casters

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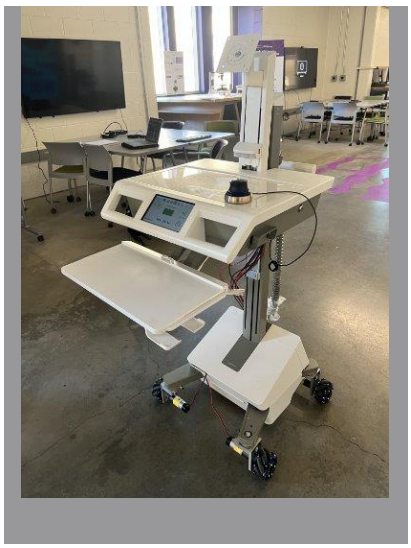
PROJECT SUMMARY:

The project involves designing a cart that can move with assisted, automated movement. Assisted, automated movement means the cart moves under its own power, but only in response to human commands. For example, like a remote-controlled toy car, it operates autonomously when prompted by a user via a joystick or control. This feature is intended to make mobile computer stations, commonly used in hospitals, easier to maneuver and move.

DESIGN GOAL:

The design goal is to create a functional working prototype. This prototype is to be a proof of concept that can be shown to Ergotron and potential customers. Using this prototype, feedback from actual nurses to improve and recommend improvements that can be made on the cart.



Powered Mecanum wheel automated Cart

DESIGN CONSTRAINTS:

- **Battery:** The cart must be able to run only on the 12-volt battery on the cart.
- **Cart:** The base cart shall be provided, and the design must be based around said cart.
- **Weight:** The cart shall be able to move with seventy-five additional pounds added to its total weight.
- **Comfort:** The cart shall be easy, comfortable, and intuitive to use.