POE to do today:

Balance pan tilt by adding weight to the other arm.

Move holding clip to middle

Design and work order or laser cut a sign for scanning

Find/ buy material for sign??

Attach second potentiometer and spacer (epoxy) for position feedback on second axis

Design, CAD, and 3D print arms for holding the stationary side of the potentiometers. Epoxy them on.

Electrical wiring and routing- minimize entanglement points.

SOFTWARE:

Before getting to ‘ground zero’: write functions (using timer based interrupts to check and correct position every ms??) that allow you to specify an angle and trust that the motor will go to and maintain that angle. Ie, how servos normally work, only implementing a basic PI loop (could even just be steep P loop) in software using timer interrupts to make sure position is maintained after it is achieved without eating all processing power.