



The arm's app controller also features an interactive mode for the user which is capable of directly intaking vector drawings via the app's joystick draw pad, to draw various lines/shapes.

D2 Accomplishments

- Transitioned from breadboard prototype to perf-board design
- Implemented drawing of arbitrary images
- Added app face detection and pre-processing
- Implemented camera and file upload from Android to ESP32 via Wi-fi connection
- Performed testing for all subsections



Requirements

- Draws portraits in <10 minutes
- Material budget of \$136
- Performs vector identification on-processor
- User-controlled interactive mode
- Operation time \leq half of recharge time



Hardware & Power Interface



Features:

14.8VDC (4x 18650 Batteries)

- Supplies up to 5A to system \bigcirc
- **12VDC Stepper motors** \bigcirc
- 5VDC ESP32 S3 \bigcirc
- 3.3VDC SD Card Module \bigcirc
- 5VDC Servo Motor \bigcirc
- Battery Life: 4 hours & 36minutes
- Charge time: 3 minutes & 35 seconds