

Check Yourself Goals

Basic

Graphics:

- Simple square checkerboard and circular pieces-
- Display messages to the user in plain english text

Communications:

- Send UART data between the FPGAs conveying game state

Game Logic:

- Check for valid moves
- Detect end of game and declare winner

Computer Vision

- Detect colored blobs through HSV -> thresholding -> filtering -> centroid pipeline
- Store calibration data
- Checker piece color lookup

Complete

Graphics:

- Show the already used pieces off to the side of the board
- Display messages to the user in different colors or patterns

Game Logic:

- Must jump rule logic
- Start logic (choose player 1 etc.)

Computer Vision

- Continually track calibration points, signal for recalibration if necessary

Stretch

Graphics:

- Add patterns to the board and game pieces
- Animate one or more messages to the user

Communications:

- Send data over Wifi

Game Logic:

- King logic
- Detect stalemate

Computer Vision

- Correct for camera distortion