



- 0. WRIST
- 1. THUMB\_CMC
- 2. THUMB\_MCP
- 3. THUMB\_IP
- 4. THUMB\_TIP
- 5. INDEX\_FINGER\_MCP
- 6. INDEX\_FINGER\_PIP
- 7. INDEX\_FINGER\_DIP
- 8. INDEX\_FINGER\_TIP
- 9. MIDDLE\_FINGER\_MCP
- 10. MIDDLE\_FINGER\_PIP

- 11. MIDDLE\_FINGER\_DIP
- 12. MIDDLE\_FINGER\_TIP
- 13. RING\_FINGER\_MCP
- 14. RING\_FINGER\_PIP
- 15. RING\_FINGER\_DIP
- 16. RING\_FINGER\_TIP
- 17. PINKY\_MCP
- 18. PINKY\_PIP
- 19. PINKY\_DIP
- 20. PINKY\_TIP



if the 8 is below the  
6, then the finger is  
closed,  
the other way round  
it is open

Verify:

Given: center x, center y, x, y

center y from 8 < center y from 6  
= closed

$\text{ImList}[\text{tipIds}[\text{tip}] - 2] \Rightarrow 8 - 2 = 6$