Long Questions

1. What are the fundamental concepts of video analytics?
2. What are the basics of video surveillance?
3. What are the scene artifacts encountered in video analysis?
4. How does adaptive background modeling and subtraction contribute to object detection and tracking in video analytics?
5. How is pedestrian detection and tracking accomplished in video analytics?
6. What methods are employed for vehicle detection and tracking in video analytics?
7. How is articulated human motion tracked in low-dimensional latent spaces?
8. How does video analytics contribute to security and surveillance?
9. How does video analytics impact retail analytics?
10. What role does video analytics play in smart cities?
11. How does video analytics contribute to industrial automation?
12. What are the key challenges in deploying video analytics for outdoor surveillance?
13. How does video analytics contribute to border security and immigration control?
14. How does video analytics contribute to public transportation systems?
15. How does video analytics contribute to environmental monitoring and conservation efforts?
16. What is behavioral analysis, and how does it relate to activity recognition?
17. How is event modeling utilized in behavioral analysis?
18. What are the key challenges in human activity recognition?
19. How does complex activity recognition differ from basic human activity recognition?
20. How are activities modeled using 3D shape in activity recognition?
21. How is video summarization employed in activity recognition?
22. What are shape-based activity models, and how are they utilized in activity recognition?
23. How is suspicious activity detection implemented in video analytics?
24. How does temporal reasoning contribute to activity modeling and recognition?
25. How are deep learning architectures applied to activity recognition?
26. What role does context play in activity recognition, and how is it incorporated into modeling?

27. How does unsupervised learning contribute to activity recognition?
28. How do transfer learning and domain adaptation techniques improve activity recognition across different domains?
29. What are the challenges and opportunities in multi-modal activity recognition?
30. How does interactive activity recognition differ from traditional activity recognition, and what are its applications?
31. How does video-based human activity recognition differ from sensor-based approaches?
32. What are the challenges in recognizing complex activities involving interactions between multiple agents?
33. How does activity recognition contribute to human-robot interaction?
34. How does activity recognition contribute to healthcare monitoring and assistive technologies?
35. How does activity recognition contribute to sports performance analysis and training?
36. How does activity recognition contribute to law enforcement and public safety?
37. How does activity recognition contribute to disaster response and emergency management?
38. How does activity recognition contribute to educational technology and personalized learning?
39. How does activity recognition contribute to gaming and virtual reality experiences?
40. How does activity recognition contribute to personal health and wellness monitoring?
41. How does activity recognition contribute to workplace productivity and employee well-being?
42. How does activity recognition contribute to environmental sustainability and conservation efforts?
43. How does activity recognition contribute to personalized advertising and marketing strategies?
44. How does activity recognition contribute to transportation demand management and urban mobility planning?
45. How does activity recognition contribute to disaster preparedness and risk mitigation?
46. What are the primary challenges faced in human face recognition?
47. How does face recognition from still images differ from recognition from video?
48. Can you explain the main steps involved in face recognition algorithms?

49. What are some popular evaluation metrics for assessing the performance of face recognition technologies?
50. How does the human brain recognize faces, and how does it compare to computer-based face recognition?
51. What role do lighting conditions play in affecting the accuracy of face recognition systems?
52. What are some ethical concerns associated with the widespread use of face recognition technology?
53. Can face recognition systems effectively deal with variations in facial expressions?
54. How do face recognition systems handle variations in age, such as changes due to aging?
55. What are some techniques used to improve the robustness of face recognition systems against spoofing attacks?
56. What are the advantages and disadvantages of using deep learning approaches for face recognition?
57. Can face recognition systems reliably distinguish between identical twins?
58. How do face recognition systems handle occlusions, such as wearing glasses or facial hair?
59. What role does data privacy play in the deployment of face recognition systems, particularly in public spaces?
60. How do face recognition systems cope with changes in facial appearance due to cosmetic surgery or injuries?
61. What are the potential biases that could arise in face recognition algorithms, and how can they be mitigated?
62. Can face recognition systems accurately recognize faces across different racial or ethnic groups?
63. What are some applications of face recognition technology beyond security and surveillance?
64. How do face recognition systems handle variations in pose and viewpoint?
65. What is the state-of-the-art performance of face recognition systems, and how does it compare to human performance?
66. How do gait recognition systems complement face recognition in biometric authentication?
67. What are the advantages of using gait recognition over other biometric modalities?
68. Can gait recognition systems accurately identify individuals in crowded or dynamic environments?

69. How do gait recognition systems handle changes in clothing or footwear?
70. What are some limitations of gait recognition systems, and how can they be addressed?
71. Can gait recognition systems be integrated with other surveillance technologies for enhanced security?
72. How do environmental factors such as lighting and terrain affect the performance of gait recognition systems?
73. What role does machine learning play in gait recognition algorithms?
74. Can gait recognition systems be used for real-time monitoring and analysis?
75. How do gait recognition systems address privacy concerns, particularly in public spaces?