1. Introduction
   1. Outline of the chapter structure to guide the reader through the methodology
   2. Overview of the methodological approach, emphasizing its relevance and contribution to the research objectives
2. Data Acquisition
   1. Data coming from camera or from dataset
   2. Acquisition Protocols for real-time video stream
3. Pre-processing
   1. Privacy Protection
      1. Patient Identification
      2. Face De-identification
   2. Data Pre-processing Techniques
      1. Normalization
      2. Segmentation, etc.
4. Feature Engineering and Extraction
   1. Feature Engineering
      1. Principle Component Analysis
      2. Wavelet Transform, etc.
   2. Feature Selection
      1. Recursive Feature Elimination
      2. SelectKBest, etc.
5. Activity Recognition Models
   1. ML
      1. Optical Flow
         1. Overview with examples
         2. Data format for OF
         3. Model Training
         4. All steps, etc.
   2. DL
      1. SlowFast
         1. Overview with examples
         2. Data format
         3. Model Training
         4. All steps, etc.
6. Data Transmission and Integration
   1. RabbitMQ, etc.
7. Forecasting Models
   1. TSAI
   2. TSTplus, etc.
8. Data Storage and Management
   1. Data Storage and Mediums
      1. SQL
      2. NoSQL
      3. PostgreSQL, etc.
9. Integration with Real-Time stream
10. Evaluation Metrics and Performance Analysis
11. Discussion and Future Directions
12. Conclusion