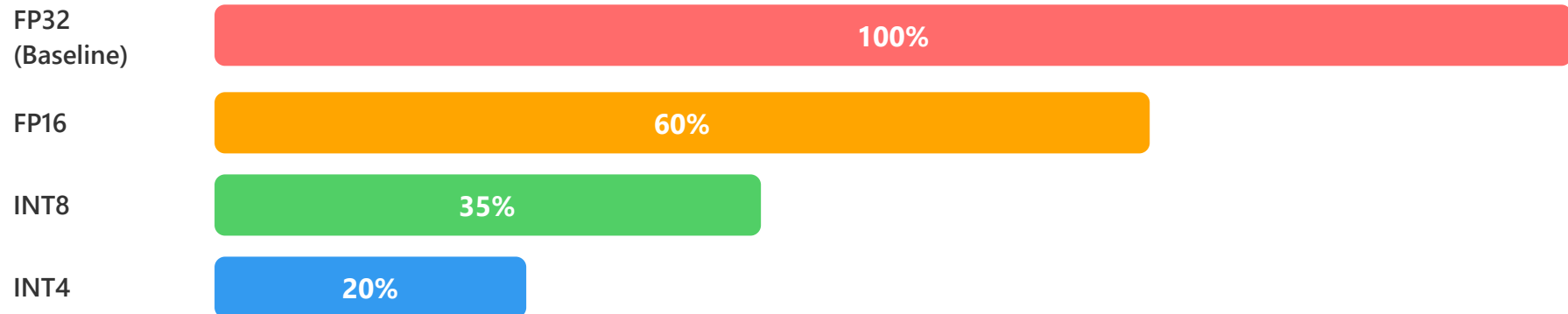


Battery Efficiency

Battery Efficiency Optimization

Minimizing power consumption for long-term use of mobile/wearable devices

Power Consumption During Model Execution



Power Saving Strategies

1 Aggressive Quantization
Reduce computational load using INT8/INT4

2 On-Demand Inference
Run model only when needed (event-based)

3 Batch Processing
Collect multiple samples and process at once

4

Hardware Accelerator Utilization

Use NPU/DSP (more efficient than CPU)

Trade-off: Battery life vs Model performance/accuracy

In medical applications, optimization must be done without compromising safety