



Transient wearable OS for healthcare solutions: 'Towards active healthy lifestyle'

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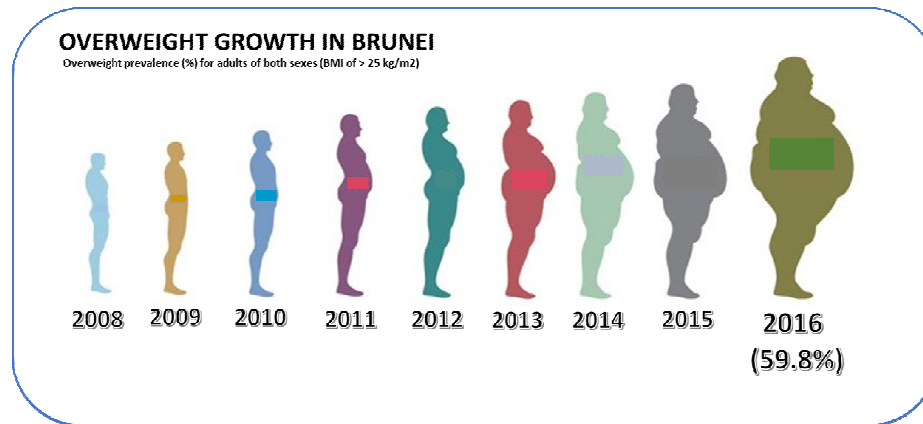
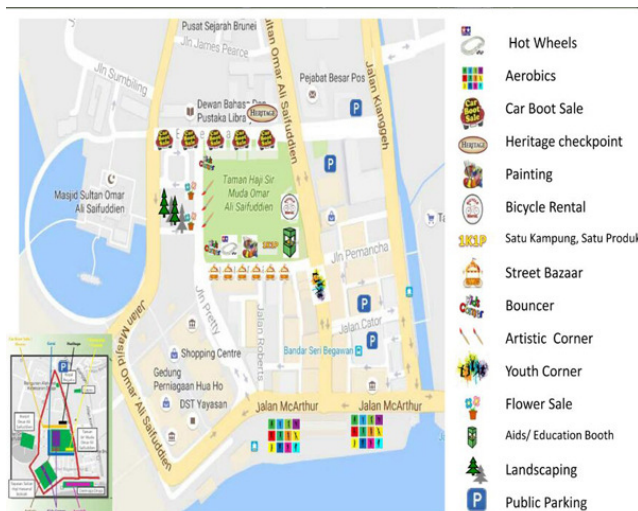
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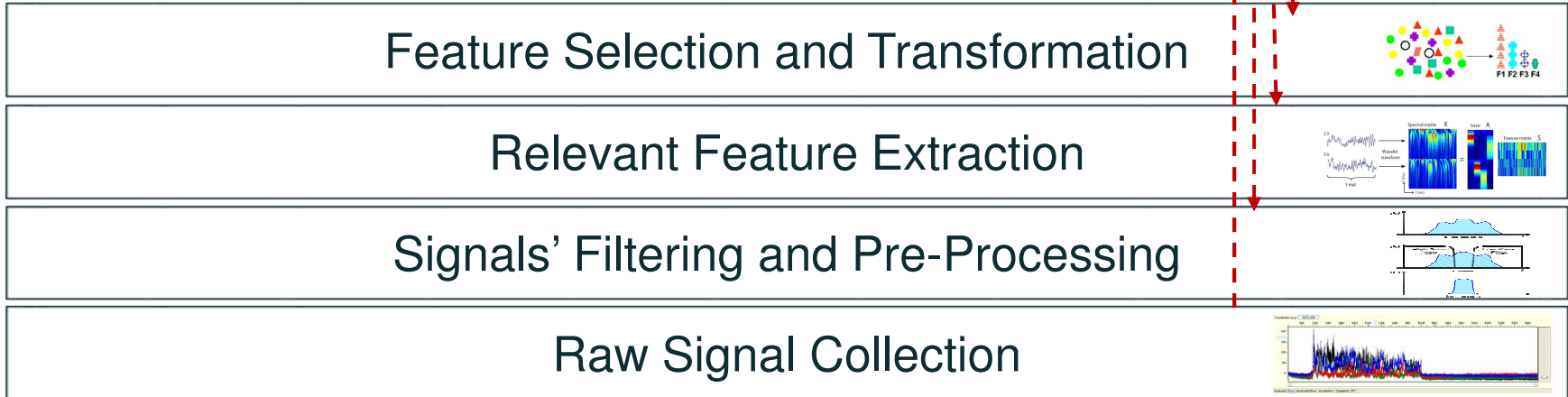
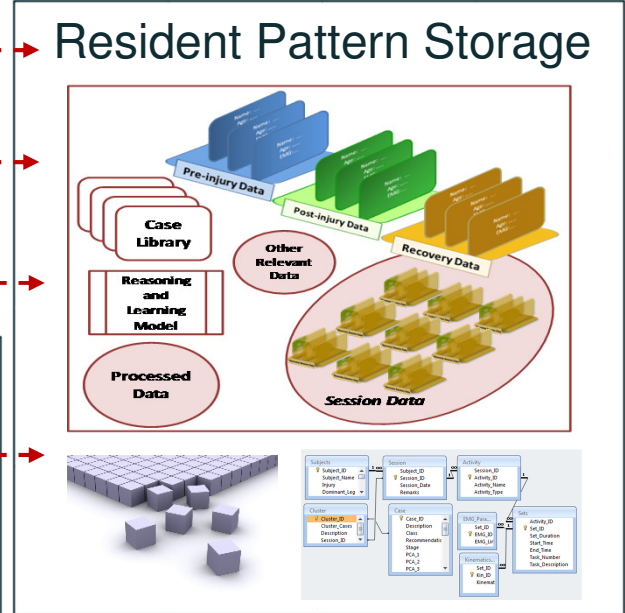
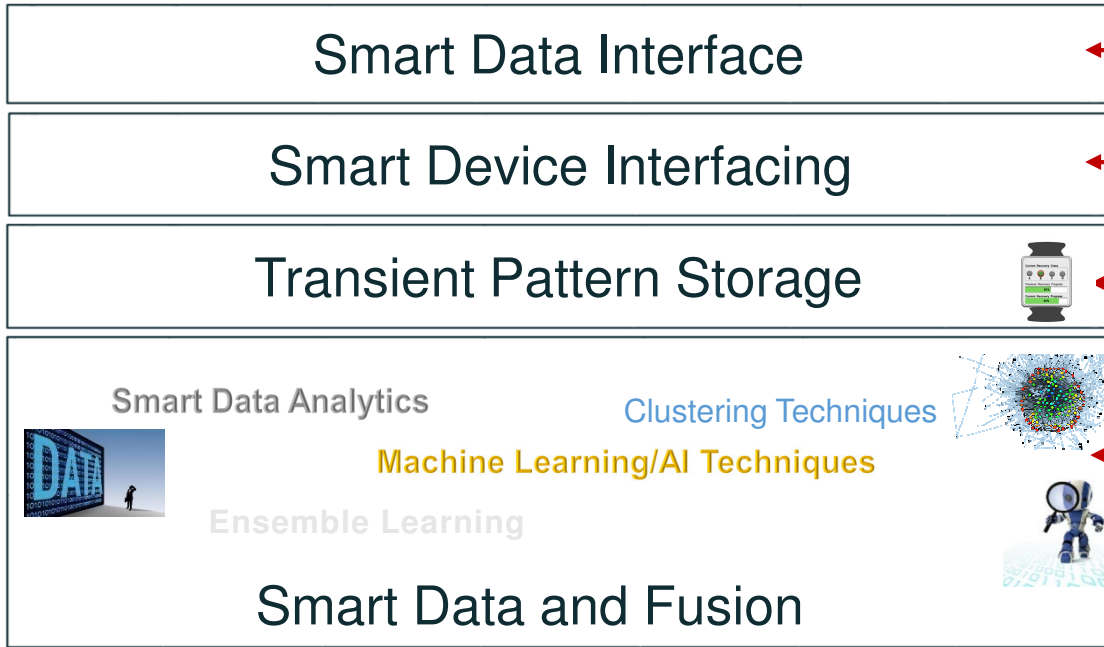
Background Information



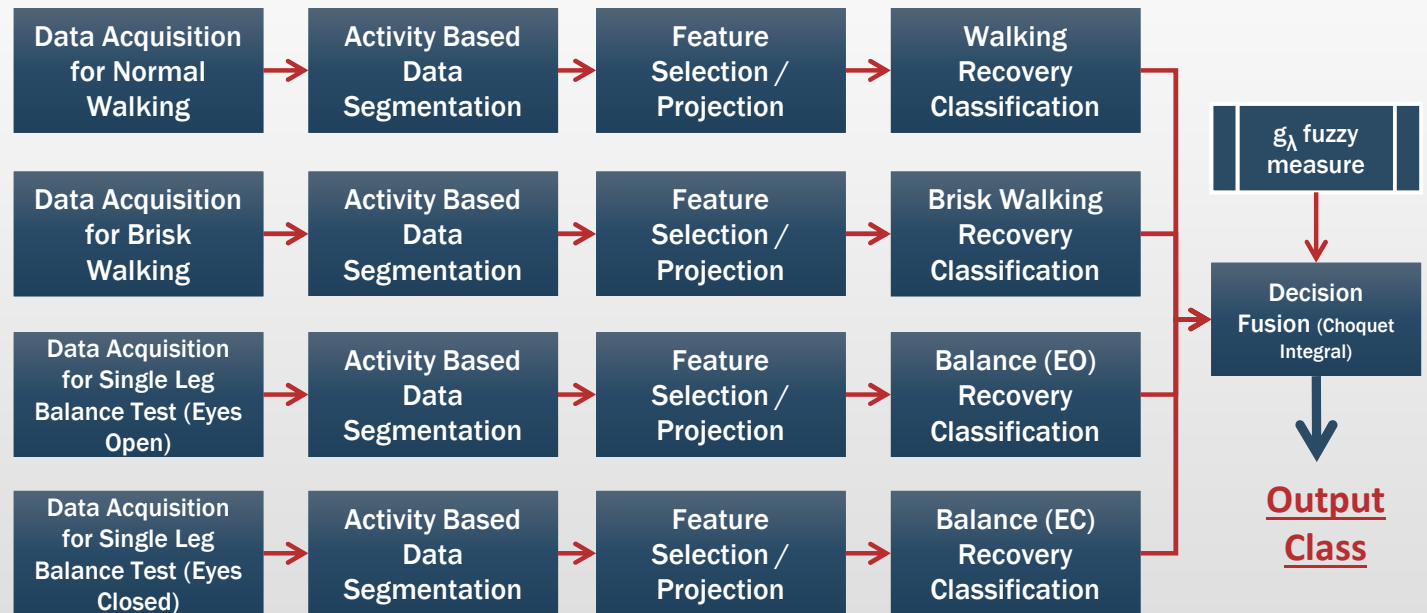
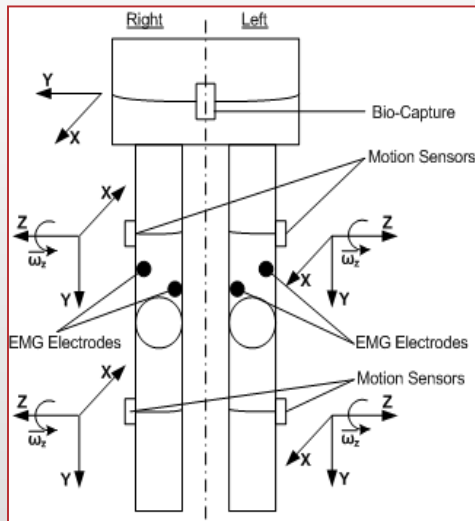
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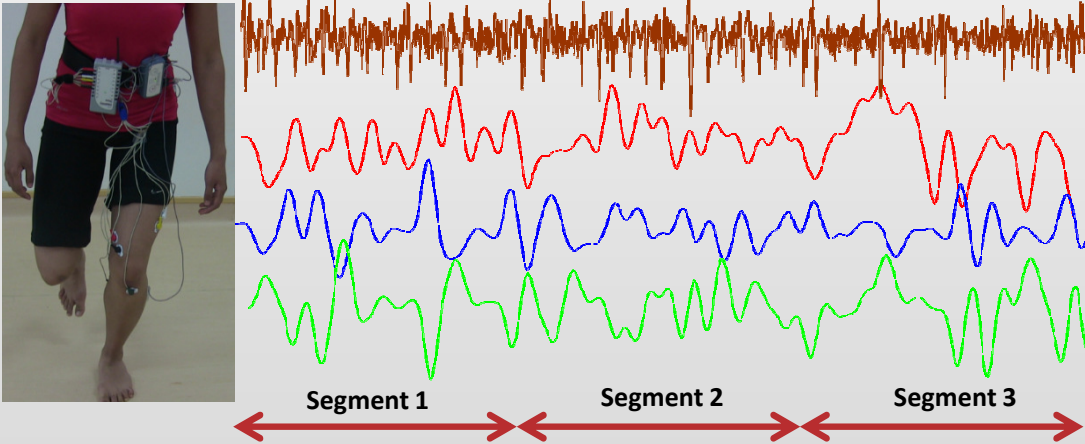
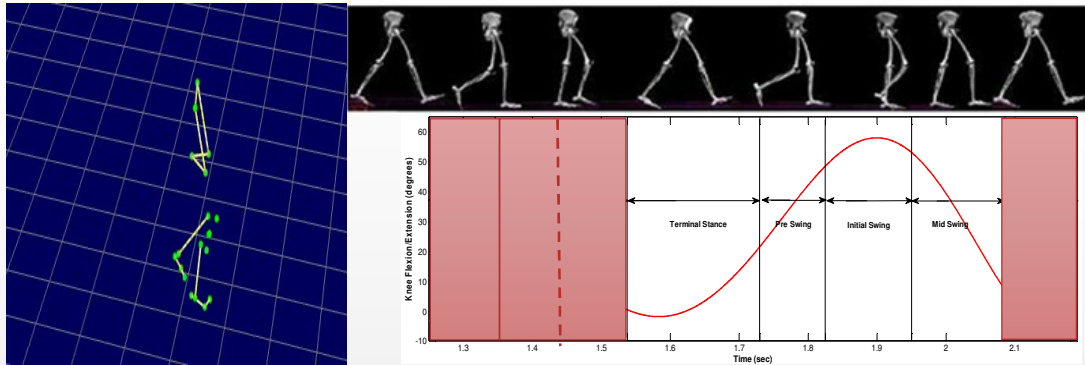


Layer 9
Layer 8
Layer 7
Layer 6
Layer 5
Layer 4
Layer 3
Layer 2
Layer 1



Formation of Resident Knowledge Base





Methodology – Data Segmentation and Feature Extraction/Projection

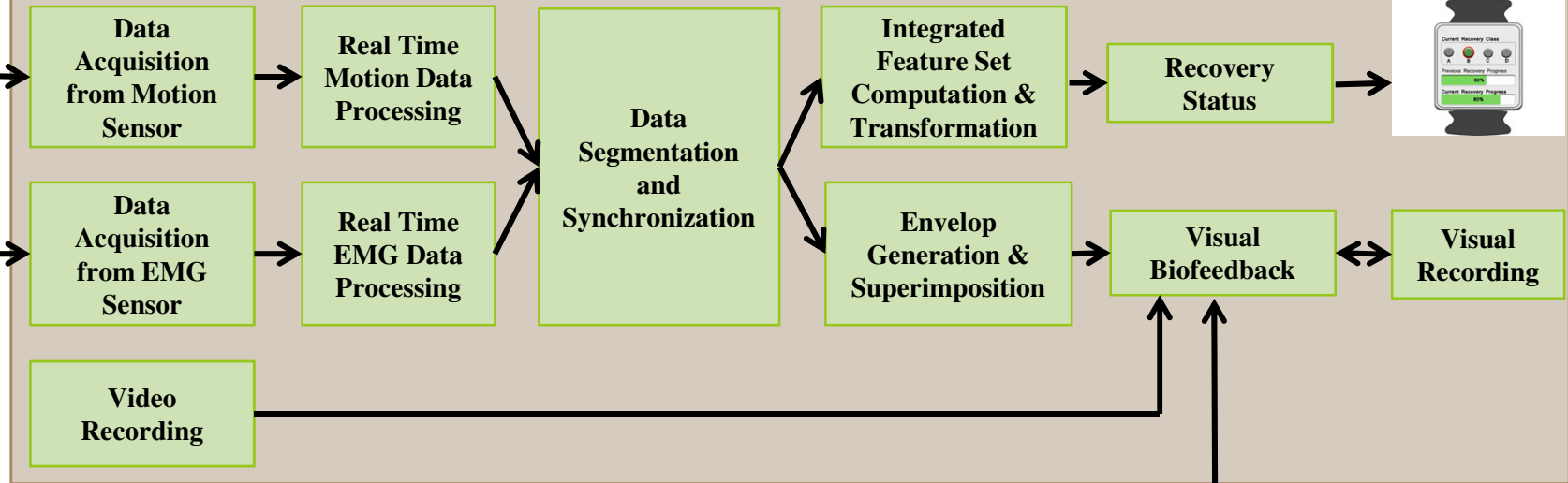
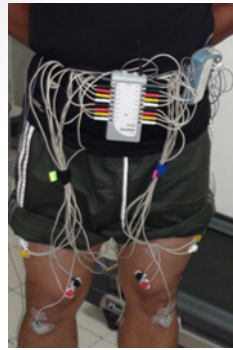
- Walking (4-6km/h) - Gait Phases based Segmentation
- Balance Testing – Time based Segmentation
- Kinematics Features
 - Flexion/Extension
 - Abduction/Adduction
 - Internal/External Rotation

Decision Fusion

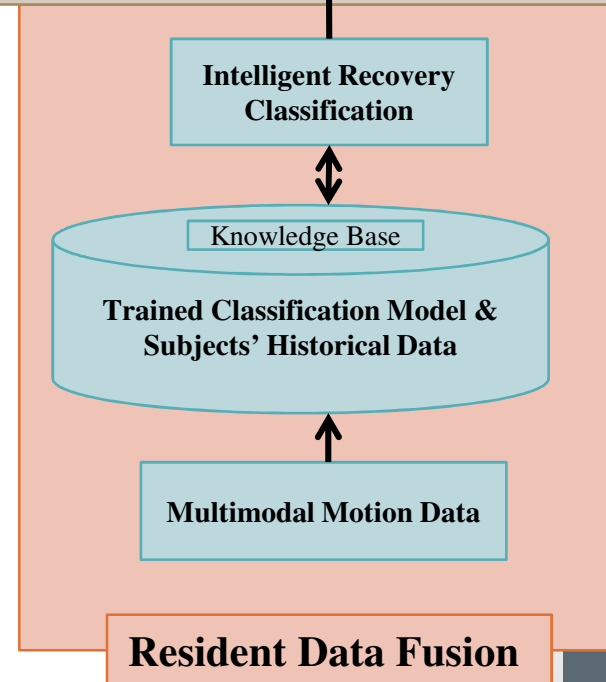
Test Data	Actual Class	Activity Classification - Partial Decision					Fusion Output
		4 km/h	5 km/h	6 km/h	Eyes Open	Eyes Closed	
a	A	C (0.3478)	A (0.3124)	A (0.6675)	B (0.7047)	C (0.4382)	A
b	B	D (0.6485)	B (0.6359)	B (0.6347)	C (0.7839)	C (0.4214)	B
c	B	A (0.5737)	B (0.4891)	A (0.6433)	B (0.6977)	B (0.6007)	B
d	C	B (0.5422)	B (0.4891)	C (0.8923)	C (0.752)	D (0.7385)	C

$g^1=0.373, g^2=0.384, g^3=0.576, g^4=0.377, g^5=0.383$ with $\beta=0.6, \lambda = -0.914$.

Interactive Graphical User Interface

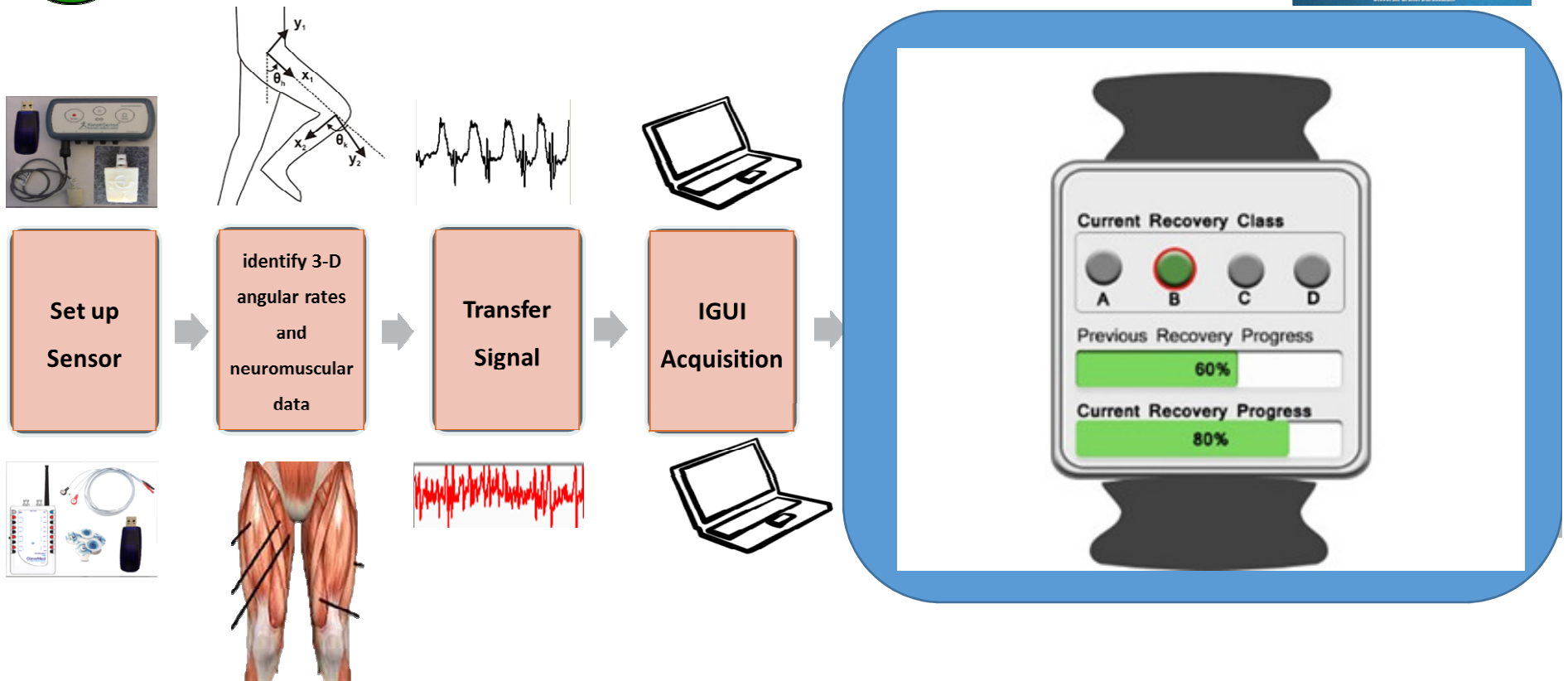


Real-time system for visual biofeedback and classification of gait patterns



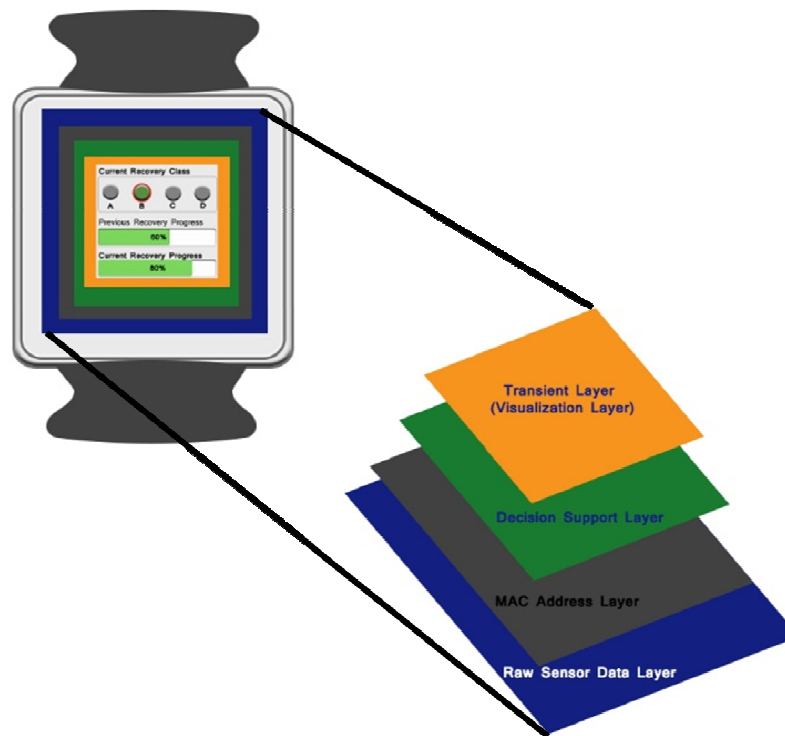
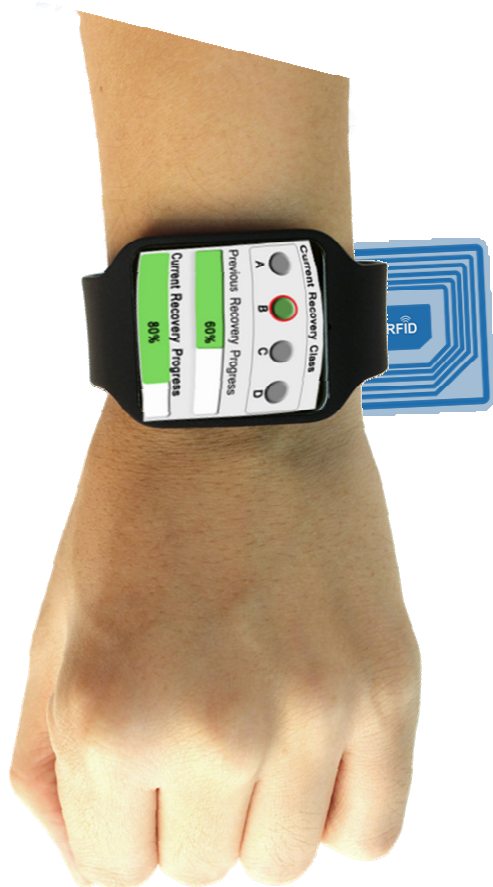


Gait & Rehabilitation Laboratory Set Up





Transient Healthcare Smart Watch OS



IntelliHealth: Global Connectivity

- ✓ <http://intelli-health.org/>
- ✓ Gifu University, Japan
- ✓ Loughborough University, UK
- ✓ UMCH Technology Sdn Bhd
- ✓ Brunei: MinDef, MOH, MYCS

Thank You
Q & A