Remote Exercise Monitor Using Kinect and SIS Server

Term Project Presentation

CS 2310 : Multimedia Software Engineering

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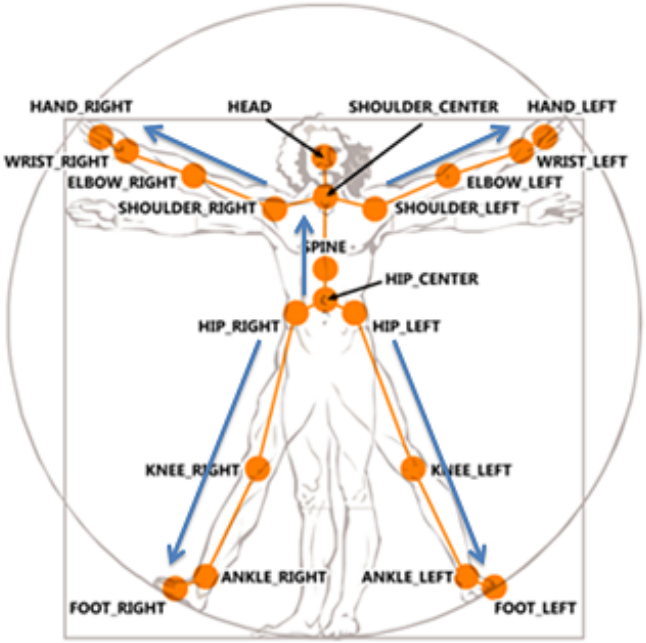
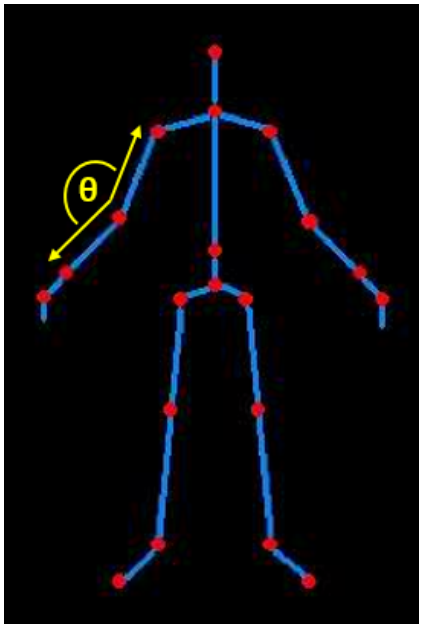
Kinect as Exercise Monitor

- Microsoft Kinect (XBOX 360) is widely used for gaming and exercise monitor
  - 'Your Shape'
  - 'Nike + Kinect training' etc.
- Kinect based remote physical therapy is also becoming very popular
- Kinect Skeleton tracker
  - can track 18 skeleton joints

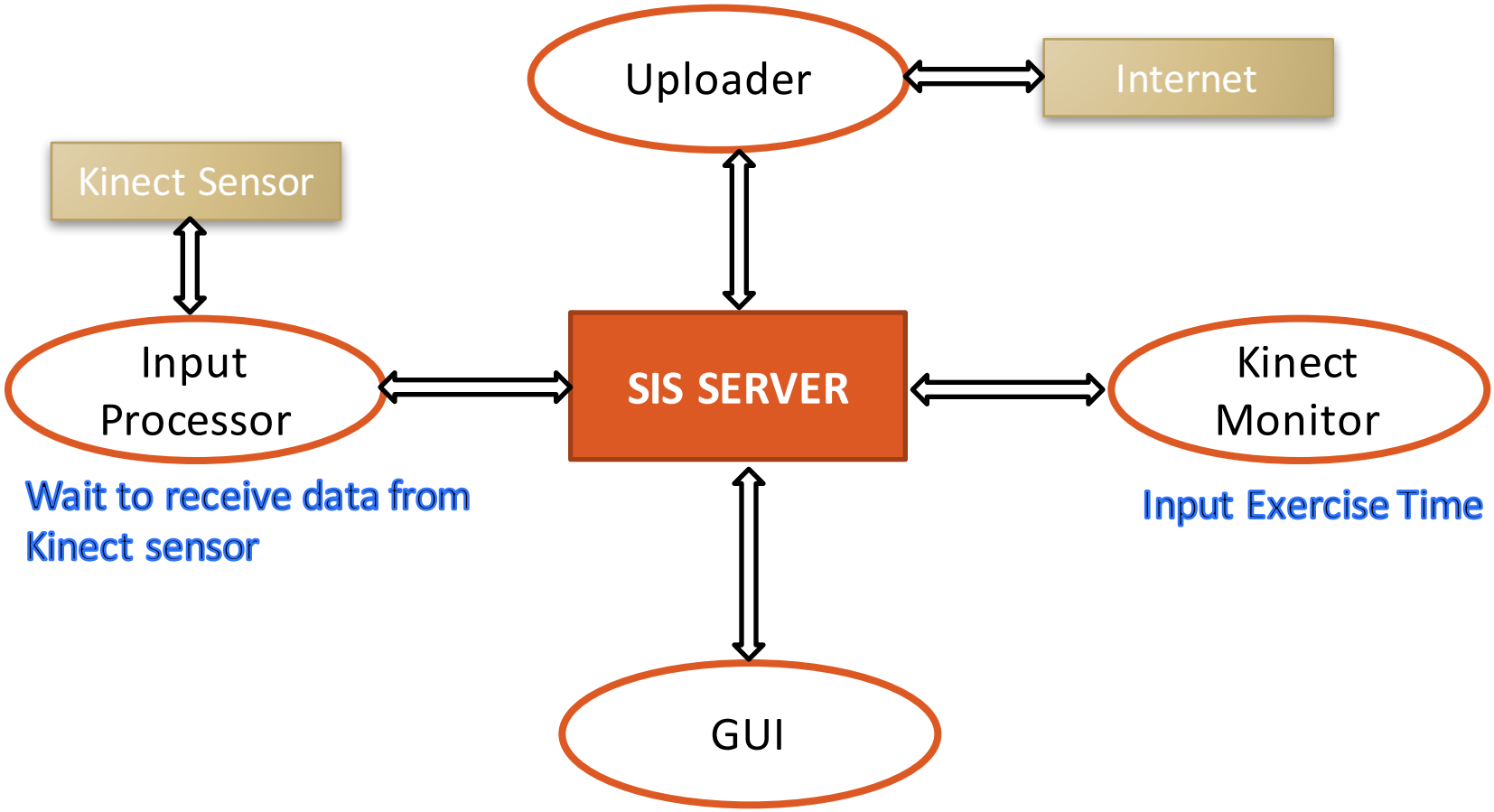
Kinect Skeleton Tracker

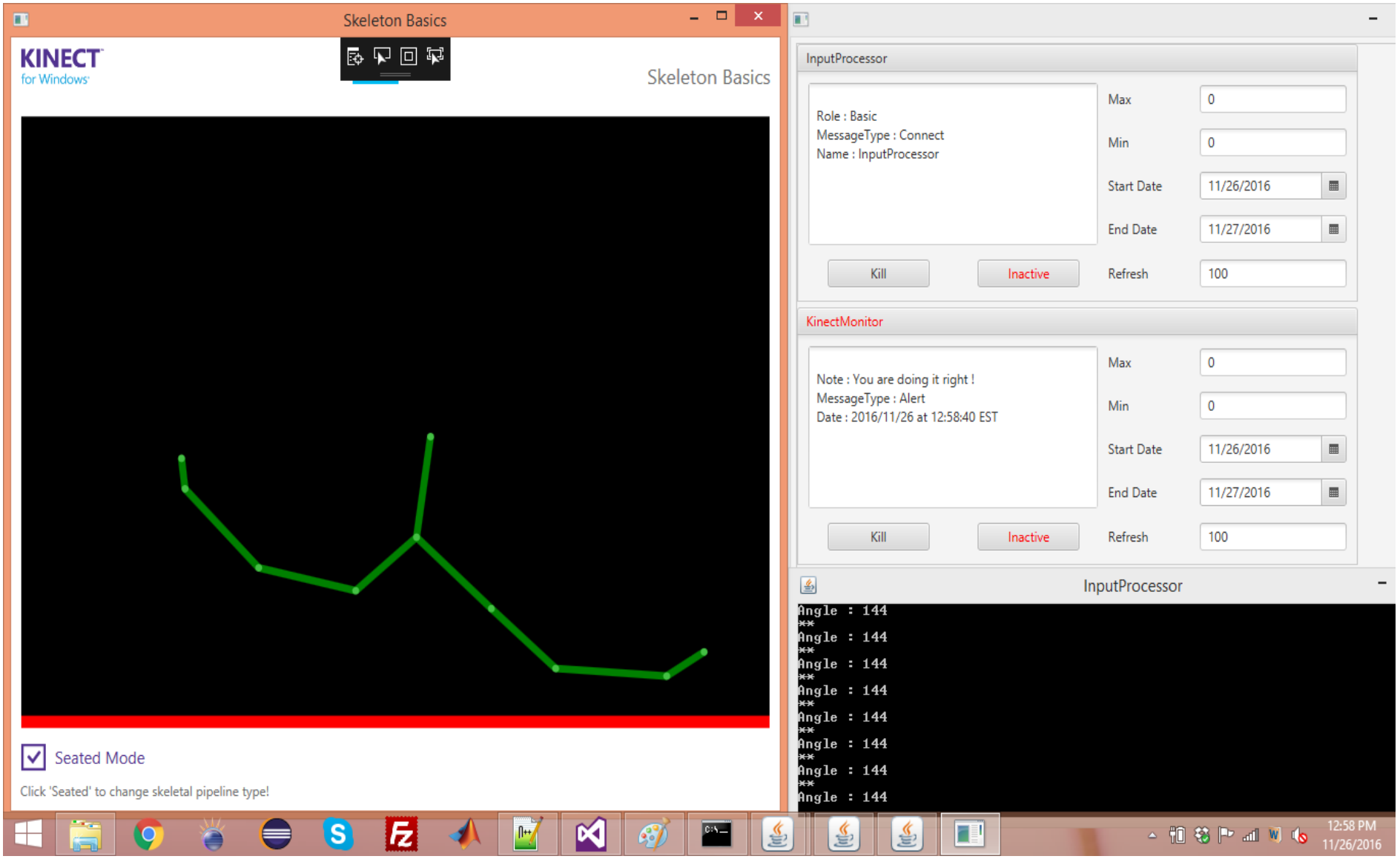
- Can track 18 skeleton joints
- Left arm elbow angle is used in this project





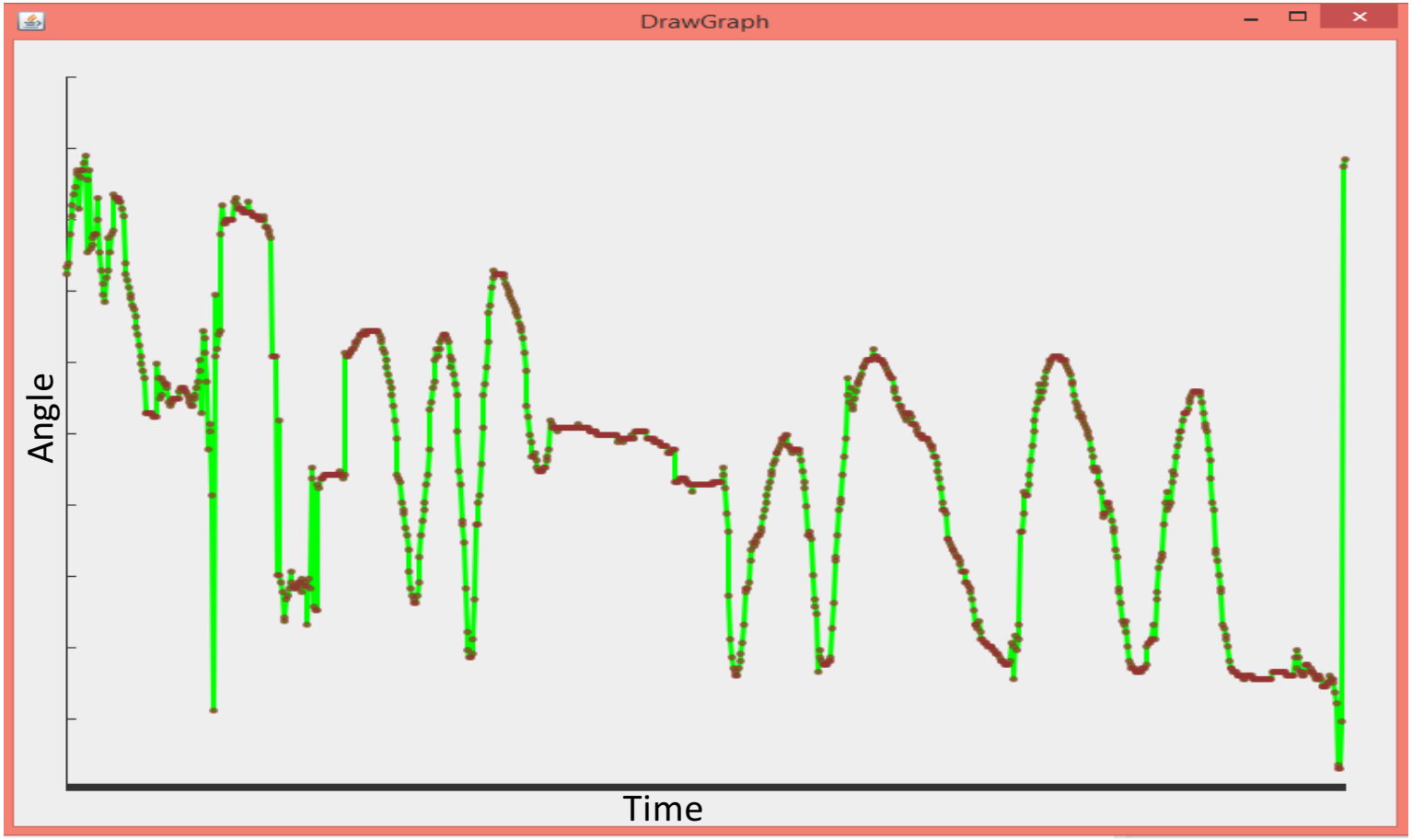
SIS Server and Components



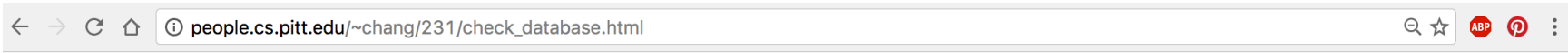

Skeleton Basics
KINECT
for Windows
Skeleton Basics
Seated Mode
Click 'Seated' to change skeletal pipeline type!
InputProcessor
Role : Basic
MessageType : Connect
Name : InputProcessor
Max
0
Min
0
Start Date
11/26/2016
End Date
11/27/2016
Kill
Inactive
Refresh
100
KinectMonitor
Note : You are doing it right !
MessageType : Alert
Date : 2016/11/26 at 12:58:40 EST
Max
0
Min
0
Start Date
11/26/2016
End Date
11/27/2016
Kill
Inactive
Refresh
100
InputProcessor
Angle : 144
**
Angle : 144
**
Angle : 144
**
Angle : 144
**
Angle : 144
**
Angle : 144
**
Angle : 144
**
Angle : 144
12:58 PM
11/26/2016

Kinect Monitor

Arm Motion Plot



Update Database



Refresh Database

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1684385	376896	2016-12-07 13:52:10	KinectMonitor	afrin	1481136730738	
1684384	376896	2016-12-07 13:52:10	KinectMonitor	afrin	1481136730713	
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1684379	376896	2016-12-07 13:52:10	KinectMonitor	afrin	1481136730533	
1684378	376896	2016-12-07 13:52:10	KinectMonitor	afrin	1481136730505	
1684377	376896	2016-12-07 13:52:10	KinectMonitor	afrin	1481136730482	
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Demo Video

- https://www.youtube.com/watch?v=pwJV5Vn0tnk&feature=youtu.be

Thank you

Questions ?