UNIVERSITY OF BIRMINGHAM

Electronic, Electrical and Systems Engineering

21 MONTH PROGRESS REPORT

Name of Student: **Miguel Pérez Xochicale**

Title of Project: **Automatic Classification of Human Movement Variability in the context of Human-Robot Interaction**

Supervisor: **Prof Baber / Dr Cooke**

Academic Advisor: **Prof Russell**

Start Date of Research Programme: **03/11/14**

Date Report Submitted: **07/09/16**

Development Needs Discussed and Planned

Supervisor/Academic Advisor - Comments

1. There is a lot of detail in this report and I'm struggling to see the wood for the trees. In my opinion the report would be improved considerably by the inclusion of a summary of progress, not just what has been done but in terms of what has been learnt and how much actual progress has been made that will translate into chapters of a PhD thesis.
2. A further issue, for me, is that there are plans to apply a number of different and complex techniques to a problem, but there is no explanation of why these techniques are especially relevant to that problem. Without this justification you are exposed to claims that you are just taking a set of techniques that happen to be popular at this time and applying them to your problem. I'm not accusing you of doing this, I'm just saying that you need to explain why the techniques are appropriate in order to avoid this charge.
3. What lessons have been learnt from the submitted papers that were rejected?
4. You talk about using the variability of human movements to classify them. Do you mean this literally? In other words are you saying that classification will be based on the variability of data rather then, for example, the proximity of data to an exemplar?
5. I'm a little concerned that at this stage you don't seem to know which sensor you want to use. I think it's important that you choose a sensor and stick with it in order to make real progress on the more important activity classification work.
6. A similar comment applies to what you say about toolkits. I think that you need to decide which approaches are appropriate (and provide justification) and then choose between the toolkits that offer that technique.
7. Whichever technique you choose, how will you know whether or not it works? There are two options. Either you use common data for which there are published baseline results, or you use your own data and create your own baseline. I think that you need to do the latter. In this case, what is an appropriate baseline classification technique?

In summary, I think I'm confident that a lot of work is being done, but I'm much less confident that this work will translate directly into PhD thesis chapters.

Signed:	Martin Russell	Date:	3/10/2016

Comments from: Dr H Ghafouri-Shiraz, Postgraduate Research Programme Manager			
Signed:		Date:	