**Initial Plan: Designing Human Robot Interaction for Older Adults**

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**CM3203 Final Year Project 40 Credits**

# **Project Description**

Can robots interact with humans, specifically older adults? If so, how do robots affect older adults through human robot interaction? How can robots support older adults’ everyday tasks? This project is an attempt to solve these problems by designing a human robot interaction that can support older adults. Examples of these are reducing loneliness through communication, being able to play with them, telling jokes, etc., while making sure to keep in mind what older adults want for these robots to help them with. Understanding how robots can support older adults’ everyday tasks is very important to create a solution these problems.

# **Project Aims and Objectives**

* Design a human robot interaction for older adults
  + Understand how robots can support older adults’ everyday tasks
  + Understand characteristics of robot interactions
    - Speech and Sound
    - Movements and Gestures
  + Understand how older adults feel about robots
    - Opinions
    - Perspectives
  + Learn how human robot interaction can affect the lives of older adults
    - Positive and Negative Impacts
  + Learn the everyday tasks that older adults will want support with from robots
    - Chatting
    - Playing with them
    - Telling jokes

# **Work Plan**

Week 1 31/01 – 06/02

* 31/01: Getting oriented about the final year project
* 04/02: Meeting with supervisor; discussing about the proposed project in a bit more detail; Asking questions that will be useful to understand the project.
* Whole Week: Create Initial Plan

Week 2 07/02 – 13/02

* 07/02: Submit Initial Plan
* 10/02: Weekly meeting with supervisor
* Whole week:
  + Understanding human robot interaction with older adults
  + Understanding how Pepper robot API works
  + Setting up development environment (Naoqi 2.5, Python SDK, Choregraphe setup)
  + Find out different everyday tasks that older adults would want support with from robots
  + Understand the effects of human robot interactions in older adults (positive and negative effects)
  + Understand speech and sound characteristic of robot interaction
  + Understand movement and gestures characteristics of robot interaction

Week 3 to Week 4 14/02 – 27/02

* Create Initial draft of final year project
  + Find and list out requirements
  + Have a project design ready
* Use Agile Project Management to keep in track of project
* Weekly meeting with supervisor every Thursday
* Possibly discuss my idea on the 24/02 with supervisor

Week 5 to Week 10 (right before Easter)

* Submit Initial draft of final year project
* Start the implementation of my idea for the project
* Weekly meeting with supervisor every Thursday
* Cross out every requirement that is completed
* Report any changes in the project
* Hopefully have the implementation completed or almost completed before Easter
* Work during Easter if necessary
* Create Test requirements

Week 11 to 12 (after Easter)

* Do all necessary testing
* Note successful and failed testing
* Write down any failure and success in the project
* Complete Final Year Project Report
* Submit Report and Project