Initial Proposed Thesis Timeline

Master Thesis Initial Timeline

Start date: 14/08/2023		August		September				October				November				December				January				February	
Milestones	Progress	w3	w4	w1	w2	w3	w4	w1	w2	w3	w4	w1	w2	w3	w4	w1	w2	w3	w4	w1	w2	w3	w4	w1	w2
Literature Review	In progress																								
Data Acquisition System																									
Familiarization/Setup and Pilot Testing	Not started																								
Design Data Synchorization System and Data Fusion	Not started																								
Finalize Stress Detection Algorithm																									
Experimental Phase																									
Experimental Design & Initial Trial	Not started																								
Subject Study and Data Collection	Not started																								
Data Analysis and Evaluation	Not started																								
Final Phase																									
Implement Robot Feedback	Not started																								
Initial Drafting of Results	Not started																								
Thesis Writing																									

(Mid-Term Presentation marked in November; Buffer Period marked in December)

Up-to-date Timeline: Thesis Roadmap.xlsx

Detailed Tasks

August W3&W4- Literature Review, Project Planning

- Deep dive into literature review and understand current state of the art.
- Refine project plane w.r.t to Literature review

Aug W4-Sept W1 -Familiarization/Setup and Pilot Testing

- Familiarize yourself and set up all sensor systems: wristband for physiological data, motion capture system for posture etc
- Develop the data acquisition system and Initial testing

Sep W2&W3- Design Data Synchronization System and Data Fusion

- Begin designing the data synchronization strategy.
- Develop the data fusion algorithms, combining physiological data, posture data, and potentially EEG data.

Sep W3&W4 Develop measure of stress Algorithm

- Extract features that can be indicators of stress.
- Finalize a working Algorithm

Oct W1&W2- Experimental Design & Initial Trial

- Plan the experiments(considering the procedure, subject selection, order of trials,), considering the different levels of robot-human interaction and the three types of robot controllers: Default, static collision avoidance, and predictive collision avoidance.
- Conduct initial trials to ensure the setup is working correctly and to refine any procedures.

Oct W3-Nov W2Subject Study and Data Collection

- Recruit participants and begin the subject study, collecting both physiological and behavioral data.

NovW3-NovW4 : Data Analysis and Evaluation

- Begin data analysis and evaluation of human stress levels for different cooperation and control approaches.
- Refine Algorithm based on initial findings

DecW1-DecW2 : Buffer Period

- Finish any pending tasks.

Dec W3&Jan W2-

- Optionally, implement the feedback mechanism for the robot based on detected human stress levels.

Dec W4 & Jan W1 -Initial Drafting of Results

Jan W3-Feb W2-Thesis Results