**UQ Summer Research Project Description**

Please use this template to create a description of each research project, eligibility requirements and expected deliverables. Project details can then be uploaded to each faculty, school, institute, and centre webpage prior to the launch of the program.

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| **Project title:** | Robot Companions: Boosting Performance or Raising Stress? |
| **Hours of engagement & delivery mode** | 20 hours a week, 13 Jan – 21 Feb 2025 in the UQ Social Neuroscience Laboratory at the St Lucia Campus. |
| **Description:** | **Background:**  As robots increasingly integrate into various aspects of human life, understanding their influence on human behaviour and performance becomes critical. Previous studies have shown that the presence of others can affect task performance, but little is known about how robots, as non-human entities, may impact this dynamic. This project seeks to explore the psychological and physiological effects of robot presence during task performance.  **Aim:**  The primary aim of this project is to investigate how the presence of NAO robots influences human performance on both difficult and easy tasks. We will also examine the emotional responses elicited by the robots using psychophysiological measures.  **Approach:**  This project will involve conducting a controlled experiment in the Social Neuroscience Laboratory at the University of Queensland. Participants will be asked to complete a series of tasks of varying difficulty, both in the presence and absence of one or two NAO robots. During these tasks, psychophysiological data will be recorded to assess emotional responses.  The selected student will be actively involved in all aspects of the research process, including experimental design, data collection, and analysis. They will also receive training in psychophysiological recording techniques and gain hands-on experience with the NAO robots. This project offers a unique opportunity to contribute to cutting-edge research at the intersection of social neuroscience and robotics. |
| **Expected learning outcomes and deliverables:** | **What Applicants Will Learn:**  1. **Psychophysiological Recording:** Hands-on experience with techniques to measure emotional responses, such as facial EMG and skin conductance.  2. **Human-Robot Interaction:** Work with NAO robots in experimental settings to study their impact on human behaviour.  3. **Experimental Design:** Develop skills in designing and conducting experiments in social neuroscience.  4. **Data Analysis:** Learn to analyse behavioural and physiological data using statistical methods.  5. **Research Communication:** Improve your ability to prepare reports and contribute to academic publications or presentations.  **Applicant Responsibilities:**  1. **Experimentation:** Assist in designing, setting up, and running experiments, including participant recruitment.  2. **Data Collection:** Collect, organise, and manage behavioural and physiological data.  3. **Data Analysis:** Conduct preliminary analyses and interpret results.  4. **Final Report:** Prepare a report summarising the research process and findings.  5. **Team Collaboration:** Work closely with lab members, contributing to discussions and supporting various research stages. |
| **Suitable for:** | This project is open to students who will be in their 3rd or 4th year in 2025. It is highly recommended that the applicant has completed NEUR3272. |
| **Primary Supervisor:** | Professor Eric Vanman |
| **Further info:** | Please arrange to have an interview with Prof Vanman prior to submitting your application: e.vanman@psy.uq.edu.au |