**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:** | **Live Mind Readings** |
| **Project duration, hours of engagement & delivery mode** | 6 Weeks – 21 hours / week, January 15 – February 23 (6 Weeks)  2 Positions  This project will encompass literature reviews, statistical analyses and lab-based data collection involving EEG. Applicants will be required to be on-site for the duration of the project, unless circumstances prevent that. |
| **Description:** | We are able to decode what people are thinking from analyses of EEG recordings of their brain activity, in real time while they are having their thoughts. This is relatively easy when the thoughts in question instigate very different patterns of brain activity, such as when people imagine having audio or visual experiences. What is less clear is if similar levels of successful live mind reading can be used to distinguish different imagined experiences within a single sensory modality. For instance, can we discern if people are imagining loud as opposed to soft sounds, or a bright sunny day as opposed to a black night?  In this project, we will instruct people to have different imagined experiences, and access how well we can decode those experiences live while they are happening. Live decoding success rates will be compared to subjective ratings, regarding the similarity of imagined experiences, and to the success rates of more detailed, offline decoding processes. |
| **Expected outcomes and deliverables:** | Scholars will gain experience in data collection, including EEG recordings and analyses, and may be involved in preparing project results to be reported via publication in an international, peer reviewed scientific journal. |
| **Suitable for:** | This project is open to applications from students with a background in experimental psychology and sensory neuroscience, with a preference for 3rd – 4th year students. |
| **Primary Supervisor:** | Prof. Derek H. Arnold |
| **Further info:** | d.arnold@psy.uq.edu.au |