**2020 Summer Winter Research Project Description**

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| **Project title:** | **Sensory determinants of confidence** |
| **Positions available:** | **2** |
| **Project duration and delivery** | Please outline the length of the project.     * *21 hours per week* * *8 weeks* * *On-site attendance is required* |
| **Description:** | The human brain forms instantaneous estimates of its own performance, which we experience as levels of confidence. These feelings of confidence allow us to learn, and avoid repeating mistakes, even when we don’t receive feedback regarding our performance. As yet, we do not know how the brain estimates its own performance, in order to express this as confidence.  In this project we will determine what sensory information and computations give rise to feelings of confidence. We will use sensory adaptation (prolonged exposure to a specific input) to induce transient changes in neural activity and perception, to determine how these govern confidence.    Our data will allow us to update computational models that predict perception to also predict confidence. |
| **Expected outcomes and deliverables:** | You will learn how to conduct psychophysical investigations of the computational processes underlying conscious sensory experience and confidence. These will involve carefully calibrated experiments, which will allow us to systematically impact neural activity, perception and confidence. You will also be shown how to construct a computational model of perception and confidence. |
| **Suitable for:** | This project is open to applicants with a background or interest in experimental psychology, consciousness and perception. |
| **Primary Supervisor:** | Associate Professor Derek Arnold |
| **Further info:** | For further information, email [d.arnold@psy.uq.edu.au](mailto:d.arnold@psy.uq.edu.au) |