Position Summary
This position will be situated at the Black Dog Institute, which is an affiliate Medical Research Institute of UNSW. The Institute is a global leader in translational mental health research. We harness the latest technology and other tools to quickly turn our world-class research findings into clinical services, education and e-health products that improve the lives of people with mental illness and the wider community. Our areas of strength include digital mental health, suicide prevention, workplace mental health, novel treatments, and prevention of depression and anxiety in young people.

The Post-Doctoral Fellow will be responsible for working with Black Dog Institute researchers as part of its adaptive trials and digital phenotyping research themes. These themes are focussed on the relationships between changes in behaviour, measured using smartphone sensors, digital intervention, and mental health and cognition in young adults. They span major funded research projects in prevention and artificial intelligence being run by the Institute.

The Postdoctoral Fellow reports to the Senior Lecturer and has no direct reports.

Accountabilities
Specific accountabilities for this role include:

- Contribute independently or as a team member in collaborative research with a focus to enhance the quality of research outcomes in the discipline area.
- Conduct research (as per the norms of the discipline) and/or enable research teams to create scholarly output that is recognised by peers.
- Undertake specific research project/s under the guidance of a research leader and contribute to development of research activities.
- Support the dissemination of research outcomes through appropriate channels and outlets.
- Undertake discipline-appropriate research activities, e.g. surveys, literature reviews, data gathering and/or recording of results using appropriate research methods.
- Work with named researchers to develop data analysis plans addressing priority research questions in adaptive trials, digital phenotyping and mental health biostatistics.
• Implement data analysis plans by extracting/staging data, performing cleaning/validation, setting up data analysis environments/scripts, completing analysis and synthesising results.
• Establish and maintain processes for ensuring quality throughout the data analysis process and for protecting the confidentiality of research participants.
• Contribute to drafting research grant proposals and tenders for commissioned research and contribute to the compliance and reporting process of funding bodies.
• Collaborate effectively and maintain strong relationships with relevant researchers within the Institute, data experts, external research collaborators, stakeholders and policy makers.
• Supervise and mentor research assistants and undergraduate students; actively provide guidance on research methods and approaches.
• Participate in and/or present at conferences and/or workshops relevant to the project as required.
• Align with and actively demonstrate the UNSW Values in Action: Our Behaviours and the UNSW Code of Conduct.
• Cooperate with all health and safety policies and procedures of the university and take all reasonable care to ensure that your actions or omissions do not impact on the health and safety of yourself or others.

Level B (in addition to the above)

• Establish a personal research portfolio and start developing independent research proposals.
• Contribute to the development of applications for competitive funding under the guidance of senior colleagues.
• Participate as co-investigator or chief investigator in competitive grant applications or show evidence of active participation in research collaborations funded by competitive grants.
• Critically appraise current methods and develop data analysis plans addressing priority research questions in adaptive trials, digital phenotyping and mental health biostatistics.
• Independently design and undertake research projects focusing on modelling/simulation of experiments; and the manipulation and analysis of sensor-derived datasets using appropriate statistical and/or machine learning-based methods.

Skills and Experience

• A university degree in data science methods, signal processing, biostatistics or a related discipline where such methods are used (e.g. engineering/applied mathematics) and/or relevant work experience.
• A PhD that substantially incorporates quantitative analysis of data relating to human behaviour or health or focussed on a technique relevant to the analysis of these kinds of data and/or relevant work experience.
• Strong understanding of theory and methods relating to quantitative analysis of data relating to human behaviour or health or focussed on a technique relevant to the analysis of these data.
• Strong applied skills in the quantitative analysis of high dimensional temporal data sets with clear evidence of hands-on expertise in data cleaning/transformation and data analysis planning/execution leading to peer-reviewed publications.
• Strong understanding and technical knowledge of commonly used and complex statistical methods, and of statistical software packages.
• Demonstrated skills with manipulating large datasets and developing custom software code for analysis using e.g. Python, R, or a related technical language.
• Familiarity with Research Data Governance and Human Research Ethics principles and their application to the analysis of sensitive research data.
• Demonstrated ability to undertake high quality academic research and conduct independent research with limited supervision.
• Demonstrated track record of publications and conference presentations relative to opportunity.
• Evidence of highly developed interpersonal skills including the demonstrated ability to work in a team, collaborate across disciplines and build effective relationships.
• Demonstrated ability to communicate and interact with a diverse range of stakeholders and students.
• An understanding of and commitment to UNSW’s aims, objectives and values in action, together with relevant policies and guidelines.
• Knowledge of health and safety responsibilities and commitment to attending relevant health and safety training.

**Level B (in addition to the above)**

• Demonstrated track record in research with outcomes of high quality and high impact with clear evidence of the desire and ability to continually achieve research excellence as well as the capacity for research leadership.
• A track record of significant involvement with the profession and/or industry.
• Demonstrated ability to conceptualise novel research questions in areas relevant to data science, signal processing, biostatistics or engineering and develop these into research outputs.
• Experience in supervision of research assistants and undergraduate students.

**Pre-Employment Checks Required for this Position**

• Verification of qualifications

*About this document*

This Position Description outlines the objectives, desired outcomes, key responsibilities, accountabilities, required skills, experience and desired behaviours required to successfully perform the role.

This template is not intended to limit the scope or accountabilities of the position. Characteristics of the position may be altered in accordance with the changing requirements of the role.