Jessica McFadyen PhD

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Cognitive scientist

Experience

2022 - present (2 years)

Senior Scientist

Alena (Aya Technologies Ltd)

As the company's "Swiss army knife", I led the application of science into the product, conducted research to evaluate the product's clinical efficacy and user experience, created data pipelines for tracking growth metrics, and helped design UI and graphical assets.

2019 - 2022 (3 years)

Research Fellow

Max Planck UCL Centre for Computational Psychiatry and Ageing Research (University College London)

Researched how the brain automatically plays out possible sequences of events before making risky decisions. Created computational models of behaviour and used machine learning to decode brain activity patterns that predict anxious decision-making.

2019 (9 months)

Postdoctoral Research Fellow

Queensland Brain Institute, Bond University

Used virtual reality (VR) to investigate how memory is affected by context changes. Research attracted media attention from radio (including *Times*) and was published in *The Conversation*.

Education

2015 - 2019 (4 years)

PhD (Cognitive Neuroscience)

Queensland Brain Institute (The University of Queensland)

2011 - 2014 (4 years)

Bachelor of Psychological Science (Hons I)

Queensland Brain Institute (The University of Queensland)

Skills

Programming languages
Javascript, React, Python, MATLAB, R, HTML, CSS, SQL

User research & experimental design
User interviews, creating surveys, A/B testing, cohort analyses, usability testing methods

Software and APIs
Mixpanel, Google Cloud (functions, BigQuery, etc.), Apple App Store Connect, Meta reporting, Typeform, Hex

Computational modelling
Dynamic causal modelling, reinforcement learning, custom model construction (behaviour, marketing, etc.)

Statistics
Machine learning methods, Bayesian methods, mixed effects modelling

Psychology
Anxiety disorders, empathy, memory, cognitive behavioural therapy (CBT), visual perception

Project management
Agile framework, team leadership, cross-functional communication, excellent communication skills

Visual design
Adobe Photoshop + Illustrator + After Effects, Figma, Squarespace, user interface design, static and animated graphical assets, social media ad design, Canva

Publications

519 citations

h-index: 9

For full list of **17** publications in peer-reviewed journals and official outlets, see:

https://scholar.google.com.au/citations?user=KxPWaFgAAAAJ&hl=en&oi=ao

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