Ronald B. Dekker, PhD

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PROFILE

I am a motivated data scientist with 10 years of experience in neuroscience and AI research. My expertise is in translating problems to concrete research designs and analyzing high-dimensional datasets using state-of-the-art statistical techniques. I recently transitioned from academia to industry, where I leverage my interdisciplinary background to inform data-driven decision making.

Keywords: deep neural networks, computational modeling, neural decoding, representation learning, training curricula, reinforcement learning

EXPERIENCE

2024-current   **Consultant at EY SaT Lab**
- Applying R&D and data science expertise to solve real-world cases
- Clients include major banks, PE firms and insurance companies

2022-2023   **Research Scientist at**
International Research Center for Neurointelligence (IRCN)
- Conducted 51 sessions of functional magnetic resonance imaging experiments.
- Devised a pipeline for decoding the semantic and emotional content of thought
- Decoded spontaneous thought and analyzed its relation to major depressive disorder

2018-2020   **Teacher and supervisor at University of Oxford**
- Demonstrated for undergraduate courses in neuroscience and statistics
- Provided research and technical skills supervision for 3 student thesis projects (1 year each)
- Projects included neuroimaging, online experiments and reinforcement learning modeling

2017-2017   **Research consultant at ActiveCues**
- Assessed feasibility of creating a new product for 50 psychopathological groups
- Brought together researchers, developers and clinicians to bring a scientific framework into practice
- Developed a serious game to tackle substance abuse using interactive light projections

2015-2017   **Editor at Amsterdam Brain and Cognition journal**
- Curated contributions and published 3 journal issues using Adobe InDesign

EDUCATION

2017 - 2021   **University of Oxford**
PhD in Neuroscience & AI (supervisor: Dr. Chris Summerfield)
Competitive funding: Wolfson Marriott Graduate Scholarship,
Medical Sciences Department CSEF grant

2010 - 2017   **University of Amsterdam**
MSc in Brain & Cognitive Sciences (cum laude), GPA: 9.0/10
BSc in Psychobiology (with honors)
BSc in Interdisciplinary Sciences

ACADEMIC ACHIEVEMENTS

Publications   Dekker, R. B., Otto, F., & Summerfield, C. (2022). Curriculum learning for human compositional generalization. *Proceedings of the National Academy of Sciences*

Dekker, R. B. (2021). Training curricula and structured representations in human and machine learning. *Doctoral dissertation, University of Oxford.*

Flesch, T., Balaguer, J., Dekker, R., Nili, H. & Summerfield, C. (2018). Comparing continual task learning in minds and machines. *Proceedings of the National Academy of Sciences*

Conferences   Current Issues in Mind-Wandering Research 2023 (Heidelberg, Gemany). Talk slot: *Dynamics of semantics in spontaneous thought*

Conference on Cognitive Computional Neuroscience (CCN) 2023 (Oxford, United Kingdom). Poster presentation: *Cross-Task fMRI Decoding: a Window into Mind-Wandering*

International Symposium on Biology of Decision Making 2019 (Oxford, United Kingdom). Poster presentation

International Symposium on Biology of Decision Making 2018 (Paris, France). Poster presentation

QUALIFICATIONS

Technical skills
(ordered by proficiency)   Python, SQL, MATLAB, JavaScript, HTML, UNIX (Ubuntu), Excel, SPSS, R, DOS, FSL, Wolfram Mathematica

Other skills   Artificial neural networks (PyTorch, TensorFlow), computational modeling, neuro-imaging, reinforcement learning, interdisciplinary collaboration, communication to non-technical audiences, experimental design, statistics

Languages   Dutch: Fluent (native)

English: Fluent - BLTC (British Language Training Centre) Academic English grade: 8.5 (obtained 2011)

Japanese: Proficient - JLPT N1 (obtained July 2023)