Spencer Arbuckle, PhD

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SELECTED EXPERIENCE

Clinical Data Lead, MindMaze (Switzerland)   08/2023 – *present*

- Responsible for developing a model of medico-economic efficiency for MindMaze's flagship home-based neurorehabilitation program (which uses gamified intervention technologies).
- Led the end-to-end development of an analytical pipeline for a real-world clinical implementation at Mount Sinai Hospital (NYC) using REDCap, Google Surveys, DBT, and Snowflake.
- Built a return-on-investment model as the neurorehab program (and analytical pipeline) was expanded into other geographies and health systems (US and Switzerland).
- Established a data-driven approach to MindMaze's neurorehab program by transforming their use of medical device data and integrating it with patient medical histories to provide profiled insights.
- Provided business analytic insights to implementation and leadership teams (medical, engineering, logistics, fulfilment) on implementational impact such as clinical impact of early inpatient discharge and idiosyncratic patient training patterns.

Public Health Data Scientist, Statistics Canada   06/*2022 – 08/2023*

- Developed a medico-economic model for estimating the out-of-pocket costs of new clinical delivery methods (with emphasis on rural and remote regions) for use by Canada's Drug Agency in their evaluation framework.

Neurotechnology Course Developer, Queen's University   02/*2022 – 03/2023*

- Helped secure $1million CAD from Ontario Government and develop a series of courses about how our brains and neurotechnologies work, and how neurotech can tackle real-world problems.

Lead Analyst, Canadian Science Policy Centre   02/*2022 – 06/2023*

- Spearheaded the re-organization of our team's analytical infrastructure by developing a set of standards for data organization and template tools / code for analyses.
- Delivered annual data insights presentation to external financial sponsors.

Computational Neuroscientist, Western University   01/*2016 – 10/2021*

- Investigated the neural organization for dexterous hand control.
- Developed a new Bayesian model pipeline for multivariate analysis of brain data.
- Secured $100,000 CAD in funding from competitive scholarships and awards.

EDUCATION

- **PhD, Computational Neuroscience**
  Western University *2021*
- **BSc (Honours), Psychology**
  Queen's University *2014*

SKILLS

- Technical skills: SQL, R, Python, git, DBT, REDCap, PowerBI
- Public speaking: speaker at international conferences; invited lectures; teaching
- Writing: 9+ journal articles; successful grants