

## Robin Sifre, Ph.D.

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Data Scientist with 8+ years of quantitative research experience in applied and collaborative settings. My work leverages eye-tracking data to develop biomarkers of autism spectrum disorders, and is used in medical device applications. I am passionate about improving people's lives through data.

## WORK EXPERIENCE

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### EarlITec Diagnostics

**Data Science Manager**, JULY 2022 - PRESENT

**Data Scientist**, AUGUST 2021 – JULY 2022

- Lead team of six data scientists in developing the eye-tracking data processing pipeline for use in early autism diagnosis. Successfully deployed pipeline for medical device product release.
- Design research studies for model development, and clinical trial studies for validation of new medical devices and diagnostic models.
- Design study for assessing data quality across candidate eye-tracking systems. Results from data analyses were used to select hardware components for medical device.

**Data Scientist/Statistician** | TransYouth Project, Princeton University

DECEMBER 2020 – AUGUST 2021

- Leveraged prospective longitudinal data on gender nonconforming youth to test theories on the impact that transitioning has on mental health.
- Designed logical and clear data organizational structure for 20-year-long study. Oversaw adoption of the new structure for incoming data.
- Built data cleaning and data import/export pipeline in R.

**Quantitative Researcher & Ph.D. Candidate** | University of Minnesota

SEP 2016 – MAY 2021

#### Metric development & adjusting for bias in survey data

- Statistically adjusted for measurement bias due to cultural factors and age in data from parents reporting on their children's behaviors.
- Applied this technique to data from the Family Life Project to develop longitudinally invariant environmental measures of poverty-related adversity and resources.
- Contributed to R package, aMNLFA, to empower researchers to adjust for measurement bias.

#### Modelling infant eye-tracking data

- Created eye-tracking processing pipeline for researchers.
- Leveraged methods from Complexity Science to quantify system dynamics in eye-tracking time series. Published results indicating that these metrics predicted when infants attended to social information.

## TECHNICAL SKILLS AND ACHIEVEMENTS

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**Software:** R, Python, MATLAB, Excel; Intermediate Java. Experience with SQL and bash scripting.

**Statistics:** Descriptive and inferential statistics. Logistic regression, factor analysis, causal inference, time series analysis, longitudinal analysis, SVM, and multi-level modelling.

**Other:** Medical device development, data visualization, data wrangling, experimental design, survey design and analysis, psychometrics, writing and communication, public speaking.

**Achievements:** Recipient of \$138,000 NSF training grant. Rhodes Scholarship finalist.

**Personal Interests:** Climbing, science outreach, hiking.

## EDUCATION

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**Ph.D. in Developmental Psychology** | University of Minnesota Twin Cities | May 2021

**B.S. in Cognitive Neuroscience** | Brown University | May 2014, Magna Cum Laude