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Tyler Burleigh

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I'm a data scientist with a unique background in human psychology. I have extensive experience working with product teams to make better decisions through metrics, experiments, and quantitative user insights. I am proficient with statistical/ML modeling, causal inference, data visualization, and designing ETL pipelines.

Education

- **PhD, Applied Cognitive Science,** University of Guelph, Canada **2011 – 2017**
- **Master of Arts, Psychology,** Carleton University, Canada **2009 – 2011**
- **Bachelor of Arts, Psychology (CS Minor),** Bishop's University, Canada **2005 – 2009**

Work Experience

Data Scientist / Data Scientist II **Prodigy Education** **Jun 2020 – Present**
Educators product team Toronto, Canada

- Designed robust ETL pipelines for core product analytics using SQL and dbt
- Developed a self-serve experiment analysis tool for product teams using SQL & Python that performs frequentist and Bayesian hypothesis tests, reducing the data team's experiment workload by **25%**
- Used quasi-experimental methods like difference-in-difference to evaluate several product releases, reducing time-to-market by more than **50%** compared to experimental methods
- Developed an ML pipeline to predict user activation using logistic regression and random forest models which achieved **74%** balanced accuracy, generating key insights into user funnel optimization
- Led a small team to engineer and evaluate prompts for a new "math tutor" product application using the latest generative AI / LLM technologies like GPT-4

Data Scientist **Clover Health** **Nov 2018 – Mar 2020**
Behavioural Science team New Jersey, US

- Designed, instrumented, and analyzed over 25 behavioral science health interventions
- Worked with product teams to implement high-impact interventions at scale by developing algorithms to identify intervention-eligible customers, and metrics and analytical designs to evaluate impact

Research Scientist **Datacubed Health** **Jan 2018 – Nov 2018**
Measurement and Technology team New York, US

- Worked with mobile app team to develop and validate neurocognitive assessments like the Flanker, Stroop, and N-back tasks that would be consistent with "gold standard" versions found in the research literature
- Developed web versions of these same cognitive assessments using HTML, JavaScript, and R that could be administered online via Amazon's Mechanical Turk
- Conducted research to empirically cross-validate mobile and web versions

Asst. Research Scientist **New York University** **Mar 2017 – Dec 2017**
Measurement and Technology team New York, US

- Managed the selection, implementation, and validation of 100+ mobile psychological assessments

Projects

pyMturkR **Sept 2019**

- Developed an R package for the AWS MTurk API to streamline workflows for online researchers
- **Technologies used:** R, Python, AWS

Technical Skills

- **Languages**: R, Python, SQL
- **Libraries**: tidyverse, tidymodels; numpy, pandas, statsmodels, sklearn
- **Technologies**: Databricks, Snowflake, Sisense, Segment, dbt