
EDUCATION

University of British Columbia

PhD in Psychology (Cognitive Science), Minor in Quantitative Methods	2015 – Present
MA in Psychology (Cognitive Science)	2013 – 2015
BA (Honors) in Psychology	2009 – 2013

SKILLS

Research Methods: Experimental design, hypothesis testing, A/B testing

Data Science: Data cleaning, exploratory data analysis, data visualization, machine learning, survey analysis

Programming: Python (Pandas, NumPy, Matplotlib, Theano), R, SPSS, Git, SQL, HTML, CSS, Java, MATLAB

Statistics: Regression, ANOVA, factor analysis, measurement theory, multivariate analysis, structural equation modelling

PROJECTS

Digital map reading

- Conducted experiments to study the cognitive factors that affect the ability to read digital maps, with the goal of improving the design of digital maps and to make them easier to learn.
- Programmed a suite of [computer-based tasks](#) to collect data across 8 different experiments, resulting in reduced downtime between projects and faster data acquisition.

Improving teaching practices

- Explored and analyzed survey data from an international, multi-institution study consisting of 6 different universities to uncover similarities in teaching practices and identify areas of improvement.
- Used factor analysis to streamline the survey, improving its statistical properties for use in future studies.

Machine learning and brainwave data

- Applied machine learning to brainwave (EEG) data, with the goal of detecting attention lapses in real-time.
- Employed various signal processing, data visualization, and machine learning techniques (artificial neural networks, convolutional neural networks) to classify patterns in brain responses.

Video game data analysis

- Collected and curated a [public dataset](#) of player performance metrics from a video game (Overwatch).
- Analyzed the dataset to uncover patterns in player performance and identify areas of improvement.

WORK EXPERIENCE

Data Analyst / Scholarship of Teaching and Learning Specialist

2016 – Present

UBC Centre for Teaching, Learning and Technology

- Collaborated with multiple course instructors to identify problem areas in current teaching methodology.
- Applied evaluation and statistical expertise to each instructor's domain-specific research question.
- Designed surveys and experiments to evaluate the effectiveness of new teaching approaches.

MA / PhD Researcher

2013 – Present

Attentional Neuroscience Lab, University of British Columbia

- Managed and mentored a team of 12 research assistants across concurrent research projects.
- Conducted pilot studies to determine the usability of experimental paradigms.
- Developed a novel smartphone-based methodology, as part of an international collaboration, to study walking in natural environments, improving upon current methods for assessing natural walking behavior.
 - Developed a [Python package](#) for analysis of phone sensor data and dashboards for data visualization.
- Presented and published work in academic journals and at research conferences.

Data Analysis Consultant

2015

Self-employed

- Worked with a Vancouver-based company to analyze a consumer survey with a quick 2-week turnaround.
 - Identified consumer spending behaviour, and the results were then used to guide future business operations and adjust product pricing.