Brandon P. **Labbree**

Research Technician Associate

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I'm a PhD Student at Northeastern University, co-mentored by Varun Mishra and Stephen Intille. I study how to detect and intervene on mental health crises from personal devices like mobile phones and smart watches.

Education

Rutgers University — *Camden, NJ*

M.A., Psychology (Thesis Track) — *Sep 2014 — Sep 2016*

- Thesis: *Accuracy of Gender and Ethnic Labels and Personality Perception As Moderated by Prejudice*
- Advisor: Wayne Chan
- GPA: 3.70 (cum laude)

Rutgers University — *Camden, NJ*

BA, Psychology & Sociology — *Sep 2010 — May 2014*

- Minors: *Childhood Studies* / *Women's and Gender Studies*
- GPA: 3.965 (Summa Cum Laude)
- Dean's List

Professional Experience

UbiWell Lab — *Boston, MA*

Graduate Researcher — *Sep 2022 — Present*

- Interdisciplinary research at the intersection of mobile/wearable sensing, data science, human-centered computing, and behavioral science.

Penn Lifespan Informatics & Neuroimaging Center — *Philadelphia, PA*

Senior Neuroimaging Data Analyst — *Oct 2018 — Aug 2022*

- Developed data pipelines for ETL and analysis of large-scale neuroimaging data sets between data warehouses in Python, R, and Bash
- Preprocessed and analysed neuroimaging data using cutting-edge software (fMRIPrep, XCPEngine, QSIPrep, ASLPrep)
- Maintained and supported multiple data curation software packages in Python and R

Salesforce — *San Francisco, CA*

Data Science Intern — *May 2017 — Oct 2017*

- Focused on discovery of organizational insight using internal human resources data sets
- Developed a semi-supervised learning algorithm to track employee performance by matching topic models of continuous feedback and goal-setting data
- Investigated comorbidity of employees' insurance claims data to dynamically classify claim types and employee phenotypes

Arzoo LLC — *Philadelphia, PA*

Private Equity Intern — *Oct 2015 — Apr 2016*

- Developed data munging pipelines in Excel for scraping business profile data

Research Experience

BioSocial Methods Collaborative (Varun Mishra, PhD) — *University of Michigan*

2021

- *Using behavioral coding, psychophysiological, and traditional behavioral methods online and in a homelike setting, conducting research that bridges biology and behavior, tackling varied interdisciplinary topics. Assisted in hosting annual research training workshops for early career researchers and graduate students in public health ad related fields*
- *Worked on several projects exploring (among other things):*
- \tab how environmental context can impact perceptions and preferences of scents;
- \tab how different framings and can infl uence individuals' appraisal of situations and influence capacity/cognitive reserves;
- \tab how co\tab parents undergo behavioral and physiological synchrony in a mildly stressful situation with a young child;

Quantitative Psychology & Statistics Lab (Fengqing Zhang, PhD) — *Drexel University*

"Momentary Changes in Heart Rate Variability Can Detect Risk for Emotional Eating Episodes." — *2015 — 2019*

- Aim: predicting emotional eating episodes in disorded eating patients using a combination of heart rate variability data and self\tab report
- Outcome: Paper published in Appetite (2019)

Quantitative Psychology & Statistics Lab (Fengqing Zhang, PhD) *Drexel University*

"Application of Advanced Data Mining Models to Identify Dietary Patterns Associated with Risk of Cardiovascular Disease." *2015 — 2019*

- Aim: compare the performance of unsupervised feature selection (PCA/FA) against regularization (L1/L2) in predicting cardiovascular disease biomarkers from high-dimensional food and behaviour survey responses
- Outcome: Master's thesis topic (2018)

Quantitative Psychology & Statistics Lab (Fengqing Zhang, PhD) *Drexel University*

"Improved Modelling of Smartphone-based Ecological Momentary Assessment Data for Dietary Lapse Prediction." *2015 — 2019*

- Aim: predicting dietary adherance lapses in participants using self-reported EMA
- Outcome: Neighbourhood-Based Balancing — A Novel Semi-Supervised Classification Algorithm for Imbalanced Data ("5-Minute Thesis", themed talk at the Well Center Symposium 2018)

Quantitative Psychology & Statistics Lab (Fengqing Zhang, PhD) *Drexel University*

"Identifying Autism Diagnostic Interview: Revised Algorithm Items that Significantly Distinguish Autism Spectrum Disorder and Down Syndrome." *2015 — 2019*

- Aim: Identify phenotypic differences between children with autism spectrum disorder, down syndrome, and comorbid diagnoses using the Autism Diagnostic Interview-Revised (ADI-R)
- Outcome: Paper published in Research in Developmental Disabilities (2019)

Quantitative Psychology & Statistics Lab (Fengqing Zhang, PhD) *Drexel University*

"Modeling Zero-Inflated MVPA Bouts Using a Hierarchical Linear Modeling Framework" *2015 — 2019*

- Aim: predict participants' moderate-to-vigorous physical activity (MVPA) bouts at timepoint 3 from previous timepoints using a zero-inflated Tweedie Poisson regression model in a growth curve modeling context
- Outcome: Final paper submitted in CFTP758 — Dyadic Analysis and Longitudinal Causal Modeling

Statistical and Applied Mathematical Sciences Institute (SAMSI) *NC State University*

"Predicting multiple sclerosis (MS)" *2016*

- Aim: classify participant diagnosis (MS patient vs. control) using lesion count along the corpus callosum in a diffusion dataset
- Outcome: Successfully predicted MS diagnosis using 3 different logistic regression segmentation approaches with 81% classification accuracy

Laboratory for Innovations in Health-Related Behavior Change (Evan Forman, PhD) *Drexel University*

"A Companion Smartphone App to Enhance Dietary Adherence through Predictive Machine Learning" *2015*

- Aim: Data collection, cleaning, and summarization with Excel and SPSS

Publications

First-author

Middle-author

Learning the affective value of people: More than affect-based mechanisms *Acta Psychologica*

C Ferrari, DW Oh, BP Labbree, A Todorov *2020*

Teaching Experience

Teaching Assistant

2018	MSc. Psychology — Statistics I & II	*Drexel University*

Service

2022 to present	Member, Mentor	*R 4 Data Science Community (R4DS.io)*
2013 to 2021	Member, Alumni Mentor	*Drexel University Gospel Choir*
2013 to 2018	Peer Counselor, VP of Scheduling & Communications	*Drexel University Peer Counseling Helpline*

Skills

Analytical

Data Science, Reproducible Research, Parameterized & Interactive Reports, Plotting & Visualization

Programming languages

R, Python, HTML/CSS, JavaScript

Packages

Tidyverse, RMarkdown, ggplot2, pacman

Tools

Git, RStudio, Jupyter Notebooks, SPSS, Qualtrics, Amazon Mechanical Turk, CloudResearch powered by TurkPrime,, FaceGen