

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

M.A., PSYCHOLOGY (THESIS TRACK)

Camden, NJ

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

BA, PSYCHOLOGY & SOCIOLOGY

Camden, NJ

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

GRADUATE RESEARCHER

Boston, MA

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

SENIOR NEUROIMAGING DATA ANALYST

Philadelphia, PA

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

DATA SCIENCE INTERN

San Francisco, CA

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

PRIVATE EQUITY INTERN

Philadelphia, PA

Oct 2015 — Apr 2016

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

Research Experience

UbiWell Lab (Varun Mishra, PhD)

Northeastern University

"STRESSFREE: ASSESSING THE SCALABILITY & FEASIBILITY OF DIGITALLY PHENOTYPING STRESS"

2022

- Aim: Developing tools and software to identify moments of heightened stress in Northeastern undergraduate students, with the long term goal of delivering just-in-time interventions to relieve stress with mobile-CBT approaches

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 disordered eating patients using a combination of heart rate variability data and self-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 adherence 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

Software & Project Contributions

FlywheelTools

10.5281/zenodo.4752798

A SUITE OF SOFTWARE TOOLS FOR CURATING YOUR NEUROIMAGING DATA INTO BIDS ON FLYWHEEL

2021

- R, Python, MongoDB, RMarkdown Reports, Docker

PC Dashboard

10.5281/zenodo.5721127

AN INTERACTIVE ANALYTICS DASHBOARD FOR THE DREXEL UNIVERSITY PEER COUNSELING HELPLINE

2017

- R, Shiny, Qualtrics API

Teaching Experience

Teaching Assistant

2018 MSc. Psychology — Statistics I & II

Drexel University

Service

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

Skills

Analytical

DATA SCIENCE, REPRODUCIBLE RESEARCH, PARAMETERIZED & INTERACTIVE REPORTS, PLOTTING & VISUALIZATION

Programming languages

R, PYTHON, HTML/CSS, JAVASCRIPT

Packages

TIDYVERSE, RMARKDOWN, GGLOT2, PACMAN

Tools

GIT, RSTUDIO, JUPYTER NOTEBOOKS, SPSS, QUALTRICS, AMAZON MECHANICAL TURK, CLOUDRESEARCH POWERED BY TURKPRIME,, FACEGEN