# Liyi Dai

Phone: 332-209-8717 | Email: ld2987@cumc.columbia.edu

## Education

**Master of Public Health, Major in Biostatistics** *Expected Graduation: May 2023*
Columbia University
GPA: 4.08 / 4.33

**Bachelor of Science, Major in Biological Sciences** *Graduated Dec. 2020*
University of California, Irvine
GPA: 3.69 / 4.0

## Research Experience

**Research Assistant, Animal Locomotion Detection and Analysis** Jan. 2020-Jun. 2020
University of California, Irvine Irvine, CA
- Gathered data through observation of canine behavior using accelerometers and quantified behaviors by synchronizing videos and accelerometer data according to a behavior ethogram.
- Analyzed data gathered from experiments using MATLAB and created data visualizations.

**Research Assistant, Epidemiological Study of Mental Illness** Dec. 2019-Jan. 2020
Center for Disease Control and Prevention (China), Shanghai Putuo District Shanghai, China
- Processed the collected data of 6046 patients with mental illness with SPSS to remove invalid data and performed statistical analysis. Used $x^2$ tests to compare the demographic data of the patients.
- Verified that there were statistical differences in gender, educational level, marital status, and family history among patients with the five mental illnesses, and proposed community management and disease prevention interventions targeting the illnesses.

## Project Experience

**Weight Loss Analysis of Two Bariatric Surgeries** Apr. 2022 – May. 2022
- Used Excel and SAS to perform data cleaning on health information such as BMI in 24 months, diabetic status, and alcohol consumption of 450 patients.
- Created descriptive statistics such as frequency tables and box plots for relevant variables using SAS, and performed ANOVA test and two-sample t-tests to conduct hypothesis testing.
- Built regression models to indicate the association between weight loss and all the potential predictors, including treatment type, gender, diabetic status, hypertension status, and alcohol consumption.

**Analysis on User Growth of An Online Shopping Platform** Apr. 2022 – May. 2022
- Analyzed website traffic including monthly trends and conversion rates of different brands and device types, and built conversion funnels to optimize the customer purchase experience using MySQL.
- Developed an A/B testing to improve conversion rates, performed sanity checks, analyzed the results by effect size test and sign test, and made recommendations based on the results of the experiment.

**Food Delivery Platform Daily Revenue Analysis** Mar. 2022
- Cleaned and preprocessed 561 ordering data from two delivery platforms by python (Pandas library), used Matplotlib to visualize the correlation between the variables to analyze user behavior
- Used Sklearn to build a linear regression model and found that CPC is significantly correlated with GMV, and the effect was different among different brands.
- Used Excel to calculate descriptive data such as conversion rates and weekly growth rates, and built pivot tables and weekly reports.
- Used Tableau to build an interactive dashboard including pie charts, line graphs, and maps to visualize the distribution of platforms, brands, orders, and exposure in a day.

## Technical Skills

- MATLAB; MySQL; Microsoft Word, Excel, and PowerPoint; Python; SAS; SPSS; Tableau.