

# Brett Loy

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## EDUCATION

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### University of California, Davis

September 2021 – June 2025

*Bachelor of Science in Statistics – Data Science Track, Minor in Mathematics*

*Davis, CA*

**Relevant Coursework:** Applied Statistical Methods: Analysis of Variance and Regression Analysis, Statistical Data Science, Multivariate Data Analysis, Big Data & High Performance Statistical Computing

## EXPERIENCE

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### VP of Finance

September 2022 – June 2025

*Tau Kappa Epsilon*

*Davis, CA*

- Developed an Excel financial model to maintain clear, accurate records easily accessible to head leadership
- Coordinated with executive team to design effective budget for events leading to positive budget variance
- Managed an annual budget of \$10,000 and over \$45,000 in rent, overseeing all financial transactions, expense tracking, and budget allocation to ensure responsible chapter spending

## PROJECTS

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### Airbnb Market Trends Analysis | *SQL, SQLite, Tableau, Python (pandas)*

- Cleaned and structured a raw 50,000+ row Airbnb listings CSV using SQL (SQLite) by selecting key columns, handling null values, converting price fields to numeric, and filtering out outliers for analytical accuracy
- Designed complex SQL queries to extract insights on pricing trends by neighborhood and room type distribution
- Developed a dynamic Tableau dashboard to visualize average prices, review scores, and property availability by neighborhood and room type, enabling intuitive exploration of market trends
- Demonstrated end-to-end data analysis workflow including data cleaning, querying, and interactive data visuals

### Heart Disease Risk Factors | *R, dplyr, ggplot2, epitools*

- Performed exploratory data analysis on a 250K+ row CDC dataset, visualizing trends using histograms and correlation heatmaps to uncover key health indicators associated with heart disease
- Engineered new features by combining categorical predictors to test interaction effects using entropy-based methods, enhancing interpretability of variable relationships and their impact on model performance.
- Presented findings through clear data visualizations and statistical summaries, effectively communicating insights on key health risk factors to inform public health strategies and predictive modeling efforts

### Restaraunt Revenue Prediction | *Python, pandas, numpy, matplotlib*

- Built predictive models using linear regression, QDA, and SVM to forecast restaurant revenue based on features such as customer count, marketing spend, and menu pricing, achieving up to 94.6% classification accuracy
- Applied resampling methods including cross-validation and bootstrapping to evaluate model generalizability, ensuring robustness across training and test splits for high variance data
- Visualized classification boundaries using LDA and QDA, providing interpretable insights into how business metrics separate high- and low-performing restaurants across defined revenue tiers

## OTHER HIGHLIGHTS

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**Languages:** Python, SQL, HTML/CSS, R

**Developer Tools:** Tableau, Microsoft Excel, Word, and Power Point, Latex, VS Code, Git

### Entrepreneur

March 2020 – Present

*Prime Cuts Barber Company*

*Foster City/Davis, CA*

- Utilized Microsoft Excel to track financial transactions and customer data, maintaining high attention to detail
- Performed multi-channel outreach and built a strategic social media presence, leading to increased visibility

### Respite Worker

October 2020 – Present

*Golden Gate Regional Center*

*Foster City, CA*

- Provided short-term, quality care and supervision for individual
- Cultivated a trusted relationship with client by ensuring safety, emotional support, and personalized engagement