

MARY MCSWEENEY

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EDUCATION

University of California, Los Angeles (UCLA), Los Angeles, CA

June 2025

Statistics and Data Science B.S.

- GPA: 3.90 | Dean's Honors (Fall 2023, Spring 2024, Spring 2025)
- Relevant Coursework: Probability, Mathematical Statistics, Linear Models, Regression Analysis, Experimental Design, Data Mining, Computational Statistics, Text Mining, Databases, Python for Data Science

Diablo Valley College, Pleasant Hill, CA

May 2023

Computer Science A.S., Mathematics A.S., and Economics A.A.

- GPA: 4.00 | Academic and Graduation Honors
- Relevant Coursework: Calculus I–III, Data Structures, MySQL, Microsoft Excel, Linear Algebra, Differential Equations, Probability & Statistics
- Certificates: Advanced C++ Programming, Computer Architecture, Program Design

TECHNICAL SKILLS

- Languages: R, Python, SQL, C++, LaTeX
- Tools: Tableau, Git, Jupyter, Microsoft Office (Excel, Word, PowerPoint), VSCode, RStudio
- Techniques: Regression, ANOVA, Logistic Modeling, EDA, XGBoost, Random Forest

ACADEMIC PROJECTS

Pitcher WAR Prediction for MLB Client

- Developed predictive models (XGBoost, linear regression) using multi-season pitch-by-pitch and game-level data to estimate pitcher Wins Above Replacement (WAR)
- Identified key performance indicators to support player evaluation and data-driven scouting strategies

Lyrics Analysis: Sentiment & Topic Modeling

- Analyzed Billboard Top 100 lyrics (1960s–2010s) using sentiment scoring, LDA topic modeling, and exploratory text mining techniques
- Built a Random Forest classifier (71% accuracy) to predict artist gender based on lyrical content

Mapping the Education Gap

- Cleaned, joined, and analyzed U.S. education data to identify regional disparities in access and performance
- Designed and published interactive Tableau dashboards to visualize geo-temporal patterns

NBA Game Outcome Prediction

- Engineered 25+ features (e.g., recent win %, team momentum, home advantage) to model NBA game outcomes
- Built classification models (Random Forest, SVM, logistic regression) and evaluated performance with 10-fold cross-validation

EXPERIENCE

On Track Learning, Alamo, CA

Tutor

December 2021 - Present

- Provide 1:1 tutoring in algebra, calculus, and other math subjects to middle and high school students, typically meeting with 6–12 students weekly, with many students continuing across multiple semesters and years
- Adapt instruction to individual student, reinforcing key concepts and preparing for tests and advanced coursework

LEADERSHIP EXPERIENCE

Chi Alpha Psi Co-Ed Transfer Fraternity, UCLA

President/Social Chair

May 2024 - Present/January 2024 - May 2024

- Lead executive board and oversee chapter operations for 30+ members, driving goal-setting and internal coordination
- Facilitate weekly officer meetings, delegate tasks, and ensure timely execution of chapter initiatives and events
- Planned and executed 12+ professional and social events per quarter, enhancing member retention and community building
- Managed logistics and \$1,500+ budgets for 3 off-campus retreats, including scheduling, transportation, and risk compliance