

## TING - YU (SOPHIA) WANG

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San Diego, CA

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### EDUCATION

**Master of Science in Business Analytics**, Rady School of Management 12/2025

University of California, San Diego, CA

GPA: 3.7/4.0

- Relevant Courses: Web Mining and Recommender Systems / Collecting and Analyzing Large Data

**Bachelor of Science in Business Analytics**, Lucas College and Graduate School of Business 06/2024

San Jose State University, San Jose, CA

GPA: 3.6/4.0

- Award/ Scholarship: Cum Laude

### EXPERIENCE

**Market Research Analyst**, City of San Jose, San Jose, CA 02/2024 – 05/2024

Collaborated with Division Manager of San Jose Parks Department to execute feasibility studies and demographic analysis for the adaptive reuse of a historic building, delivering data-driven recommendations

- Conducted demographic and market research using R to analyze community needs and forecasted demand for recreation programs, predicting an increase of over 100 participants based on a 95% confidence interval
- Created interactive Tableau visualizations to present findings, leading to a recommendation for converting the building into a rental space for community events, generating potential revenue

**Business Intelligence Intern**, JunHe Technology Co., LTD, Taichung, Taiwan 06/2023 – 09/2023

JunHe Technology Co., LTD is a rapidly expanding plastic injection company specializing in contact lenses, medical components, and optical module lenses, with several hundred employees

- Partnered with business analysts to pioneer NLP techniques leveraging TensorFlow, building machine learning models boosting sentiment analysis accuracy over legacy Excel methods
- Engineered Tableau visualization reporting sales data sliced by product line, region & customer persona to spotlight growth opportunities

### PROJECTS

**Machine Learning Model Comparison for Customer Response Prediction** 02/2025

- Implemented comparative analysis of four machine learning models (Logistic Regression, Random Forest, Neural Network, XGBoost) on 600K customer interaction dataset
- Developed predictive framework to optimize marketing message targeting, demonstrating potential 20%+ revenue improvement through a personalized approach
- Rigorously evaluated model performance using AUC, precision, recall and profit analysis
- Created visualization dashboards comparing model performance using gains plots and profit curves

**Natural Language Processing: Word Embedding and Sentiment Analysis** 02/2025

- Investigated semantic similarities across financial vocabulary using advanced word embedding techniques with GloVe and Word2Vec
- Constructed a sentence embedding approach that integrates pre-trained word vectors while incorporating effective negation handling and comprehensive stopword filtering to enhance semantic accuracy
- Designed and implemented a logistic regression classifier for financial sentiment analysis that achieved robust performance, with an AUROC of 0.8423, a Macro F1-Score of 0.6135, and a Micro F1-Score of 0.7155
- Pioneered Laplace smoothing techniques to effectively mitigate zero probabilities in a 52-token unigram language model, ensuring reliable probability estimates
- Synthesized comparative analysis revealing GloVe's superior performance in capturing semantic nuances

**Data Mining of the Airline Passenger Satisfaction** 12/2023

- Utilized comprehensive data cleaning, EDA, and visualization on a 100K+ observation dataset in R, and built predictive models (ensemble random forest with 500 trees/4 variables per split, logistic regression, classification trees) to forecast satisfaction labels
- Appraised model performance using train/test splits, out-of-bag estimates, misclassification rates, AUC, and cost curves, distilling insights into a reproducible RMarkdown report with detailed figures and tables

### SPECIALIZED SKILLS

- **Technical Skills:** Python, SQL, R, Tableau, MS Excel, Salesforce, TensorFlow, SQL Developer, Google Analytics
- **Analytical Skills:** Statistical Analysis, Data Visualization, Predictive Modeling, A/B Test
- **Certifications:** SQL: Data Reporting and Analysis - LinkedIn Learning  
Project Management Skills for Leaders - LinkedIn Learning  
Building and Deploying Deep Learning Applications with TensorFlow - LinkedIn Learning