Ethan Tsao

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EDUCATION

University of California, Santa Barbara   **Expected Graduation: June 2026**
B.S. in Statistics & Data Science, Technology Management Program   **Cumulative GPA:** 3.36/4.0
Coursework: Probability and Statistics (I-III), Regression Analysis, Statistical ML, Stochastic Processes, Design of Experiments

WORK EXPERIENCE

Aquila Clouds   **Pleasanton, CA**
Software Engineer Intern   *Jun. 2025 - Present*
- Refactored 20+ React components to improve scalability and reduced interface load times by 9% across FinOps dashboards. Proactively implemented robust error boundaries and data validation, increasing UI reliability and debuggability.
- Led full-stack integration of REST APIs and EChart visualizations for product feedback and month-over-month cost insight.
- Partnered with engineering and stakeholders to enhance cloud cost dashboards, uncovering 15% savings opportunities.
- Migrated a complex data table component, improving maintainability and aligning with modern UI component standards.

Mosher Alumni Hall   **Santa Barbara, CA**
Alumni Affairs Intern   *Oct. 2024 - Jun. 2025*
- Managed end-to-end logistics for 60+ university events; ensured seamless AV operations, and customer satisfaction.
- Standardized event documentation and supported post-event reporting using spreadsheets and basic financial data tools.

Quickly Corporation   **Pleasanton, CA**
Crew Member   *Jul. 2021 - May 2022*
- Led store operations and trained 3+ new hires on customer experience workflows and health protocols over two weeks.
- Analyzed customer reviews with Excel, uncovering pain points and boosting store rating by 0.3 through operational tweaks.

PROJECTS

NBA Draft Modeling   *May 2025*
- Designed a predictive model using Random Forest ($R^2 = 0.897$) to match teams and prospects based on positional needs.
- Scraped news articles for NBA data using BeautifulSoup, pandas, spaCy, NumPy, to extract team needs and player positions.
- Translated outputs into a user-facing tool that helps fans and analysts explore draft scenarios and decision-making drivers.

Bank Churn Prediction   *Mar. 2025*
- Applied customer segmentation logic, deployed classification models (XGBoost, Bagging, K-NN) to detect churn patterns.
- Performed EDA using histograms, box plots, correlation heatmaps, and optimized hyperparameters using cross-validation.
- Boosted model precision by 10% via AUC-ROC tuning, cross-validation, and hyperparameter grid search.

World Happiness Study   *Feb. 2025*
- Built a Random Forest regression model to predict the top 10 happiest countries in 2025, optimizing mtry for R^2, RMSE.
- Conducted ANOVA and t-tests using ggplot2, dplyr, tidymodels to analyze GDP, life expectancy, and trends across regions.
- Applied linear regression and correlation analysis to quantify the impact of happiness factors, identifying key predictors.

Airline Review Dashboard   *Jan. 2025*
- Built an interactive Tableau dashboard analyzing 2,000+ airline reviews with dynamic filters, revealing a 4.2 overall rating.
- Uncovered performance disparities across 10+ aircraft types, integrated monthly trend analysis and country-level heatmaps.
- Identified low-rated areas: entertainment (1.4/5) and value for money (2.8/5) for targeted customer experience improvements.

ORGANIZATIONS

Gaucho Sports Analytics   **Santa Barbara, CA**
Project Member   *Mar. 2025 - Present*
- Collaborated with UCSB Baseball to develop lineup optimization logic using WAR, ETL pipelines, OBP-based modeling.
- Scraped Big West stat sheets to extract player performance metrics, identified trends using Markov Chains and OBP stats.

Delta Sigma Pi - Rho Sigma Chapter   **Santa Barbara, CA**
VP of Professional Activities   *Feb. 2024 - Apr. 2024*
- Coordinated keynote talk with NASA JPL speaker for 50+ attendees; demonstrated initiative in stakeholder engagement.
- Led volunteer efforts and helped drive local outreach events as part of the chapter's social impact mission.

SKILLS/INTERESTS

Tools: Python, R, SQL, SAS, Javascript, HTML, CSS, NumPy, Pandas, SKLearn, React, Node, Git, Tableau, AWS, GCP, Azure
Interests: Data Science, Data/Software Engineering, Cloud, Fullstack, AI/ML, Product Development, Systems Design, Finance