TAYLOR KIRK

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EDUCATION

University of San Diego | M.S. Applied Data Science | May 2024 – Expected April 2026

Coursework: Probability and Statistic for Data Science, Applied Data Mining, Applied Data Science for Business, Applied Predictive Modeling, Applied Time Series Analysis, Machine Learning and Deep Learning, Practical Data Engineering, Data Science with Cloud Computing, Applied Large Language Models for Data Science

UCLA | B.A. Sociology | Sept 2009 – Jun 2013

EXPERIENCE

Freelance Contract – Upwork (Jan 2025 – Sept 2025)
AI/ML Engineer

- Developed an application integrating language models to assist therapy students through role-play of specific therapeutic techniques.
- Researched and evaluated approaches for modeling therapist responses, setting up ML pipelines with scikit-learn and MLflow for classification and evaluation
- Designed a synthetic data generation process to fine-tune language models to simulate realistic patient profiles and interactions.

LiaiZen – (Mar 2025 – Oct 2025)
AI Engineering Intern

- Developed the AI moderation layer for a co-parenting communication platform
- Integrated LangGraph and LangChain workflows with Redis for in-session context management and Postgres for persistent storage
- Collaborated on designing guardrails to detect and reshape toxic communication without losing conversational tone

Aya Healthcare (Oct 2014 – Sept 2024)
Senior Recruiter

- Place 1,500+ travel RNs, contributing to Aya's growth from 600 to 40,000+ clinicians
- Adapted strategies to dynamic shifts (COVID, new operating systems) and improved recruitment processes.
- Recognized with Circle of Excellence (4x) for consistent top-tier performance.

ACADEMIC PROJECTS

- **AI vs. Human Image Classification**: Built a multi-stage pipeline to classify AI-generated vs. human-generated images. Engineered features using HOG, color histograms, edge density, hue, and GLCM texture metrics; trained classical ML models, with **Random Forest** achieving **92.23%** accuracy. Complemented with **EfficientNet** feature extraction and **TensorFlow** fine-tuning with hyperparameter optimization, demonstrating trade-offs between deep learning and classical approaches while achieving strong performance in synthetic media detection.

- **News Topic Classification:** Developed a multi-class text classification model to categorize news articles by applying **NLP** techniques for data tokenization and feature engineering, and performing exploratory data analysis (**EDA**) to prepare the data for modeling. Experimented with **Logistic Regression, Random Forest, and SVM**, selecting the SVM model with PCA decomposition as the best performer, achieving **96.28% accuracy**.

- **Amazon review helpfulness prediction and topic modeling:** Built an end-to-end NLP and predictive analytics pipeline on Amazon review data to predict the reviews that customers were most likely to find helpful. Framed the problem as classification, achieving a **1.66× lift over baseline**, and applied **NMF and LDA topic modeling** to identify themes associated with helpful vs. unhelpful and low- vs. high-rated reviews. Deployed an interactive Streamlit App allowing users to explore findings and run topic modeling and predictions on their own datasets, with **LLM-assisted interpretation** of results.

SKILLS

Programming & Data: Python, R, SQL
Machine Learning & AI: Regression, Classification, Pandas, Numpy, TensorFlow, Scikit-learn, NLP, LangChain, LangGraph, RAG, Prompt Engineering, Fine-tuning, Synthetic Data Generation
Data Infrastructure: Postgres, Redis, Hugging Face, OpenAI API, MLFlow, Azure, Amazon Sagemaker
Core Skills: Collaboration, Communication, Problem-Solving, Curiosity, Adaptability