

# ANGELINA COTTONE

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## PROFESSIONAL SUMMARY

Statistics graduate from the University of California, Davis with an emphasis in Statistical Data Science. Experienced in large-scale data cleaning, exploratory analysis, predictive modeling, and visualization using Python and R. Strong background in regression, time series analysis, and machine learning with applied projects in healthcare, economics, and media analytics. Seeking entry-level data analyst roles.

## TECHNICAL SKILLS

- **Programming & Tools:** Python, R, Excel, NumPy, pandas, scikit-learn, NetworkX, Plotly, ggplot2
- **Statistical Methods:** Regression (GLM, Lasso), Time Series (ARIMA), Multivariate Analysis, Hypothesis Testing
- **Data & Modeling:** Data Cleaning, EDA, Feature Engineering, Predictive Modeling, Data Visualization

## EDUCATION

<b>University of California, Davis</b>	<b>Davis, CA</b>
<i>Bachelor of Science in Statistics, Emphasis in Statistical Data Science</i>	<i>Dec 2025</i>
<ul style="list-style-type: none"><li>• Coursework: Probability Theory, Mathematical Statistics, Analysis of Variance, Regression Analysis, Statistical Data Science, Advanced Statistical Computing, Statistical Learning I, Multivariate Data Analysis, Applied Time Series Analysis, Business Writing</li></ul>	
<b>Folsom Lake College</b>	<b>Folsom, CA</b>
<i>Associate of Science in Pre-Health Occupations</i>	<i>Jun 2023</i>
<i>Associate of Art in Math and Science; Psychology; Social and Behavioral Sciences</i>	

## SELECTED PROJECTS

<b>HEALTHCARE NETWORK PAGERANK &amp; RISK PROPAGATION ANALYSIS (PYTHON)</b>	<i>Sep 2025</i>
<ul style="list-style-type: none"><li>• Modeled physician referral networks with 1M+ providers and 30M+ referral pairs using NetworkX</li><li>• Applied PageRank and centrality measures to quantify referral concentration and provider influence</li><li>• Implemented scalable power-iteration PageRank and network based VaR / Expected Shortfall risk metrics</li><li>• Visualized network structure and risk propagation with interactive Plotly dashboards</li></ul>	
<b>PREDICTING FILM AUDIENCE SCORES WITH GRAPHICAL MODELS (PYTHON)</b>	<i>Dec 2025</i>
<i>Team of 5</i> <ul style="list-style-type: none"><li>• Built a 66k+ film dataset (2010-2025) by integrating TMDB API data, Rotten Tomatoes audience scores, and YouTube trailer metrics</li><li>• Engineered 150+ features and trained XGBoost regression models (RMSE = 0.18)</li><li>• Contributed to a stacking ensemble with GNN and knowledge-graph models (RMSE = 0.10)</li><li>• Supported deployment of an interactive Streamlit dashboard for prediction and model comparison</li></ul>	
<b>TIME SERIES ANALYSIS OF CENTRAL AFRICAN REPUBLIC ECONOMIC DATA (R)</b>	<i>Dec 2025</i>
<ul style="list-style-type: none"><li>• Analyzed 58 years (1960-2017) of GDP, exports, and population data using ARIMA models</li><li>• Conducted stationarity testing (ADF), differencing, and AIC-based model selection</li><li>• Generated 10-year forecasts with prediction intervals and cross-correlation analysis</li></ul>	
<b>ANALYSIS OF FACTORS INFLUENCING HOSPITAL LENGTH OF STAY (R)</b>	<i>Dec 2024</i>
<ul style="list-style-type: none"><li>• Analyzed 100k patient records with 28 clinical, demographic, and laboratory variables to identify drivers of hospital length of stay (LOS)</li><li>• Fit quasi-Poisson GLMs with Lasso feature selection (<math>R^2 = 0.53</math>, RMSE = 1.63 days)</li><li>• Engineered nonlinear effects and applied PCA/K-means to identify patient subgroups</li></ul>	

## ADDITIONAL PROJECTS

- **Medicare Geographic Variation Analysis (Excel):** CMS data analysis of 300+ hospital referral regions
- **Comparing La Masia and Hale End Academy Graduates (Python):** Multi-source scraping, per-90 metrics, dashboards
- **Reinforcement Learning on Mancala (Python):** Q-learning agent improved win rate from 30% to 72%

## WORK EXPERIENCE

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### HELP AT HOME SENIOR CARE

**Auburn, CA**

*In-Home Caregiver*

*Mar 2025 – Present*

- Maintained accurate, confidential client records with strict adherence to documentation standards
- Identified behavioral and health trends to support care adjustments and decision-making

### PSYNERGY PROGRAMS, INC

**Rancho Cordova, CA**

*Residential Caregiver*

*Feb 2023 – Nov 2024*

- Recorded and analyzed behavioral data across 60+ residents to support individualized treatment plans
- Communicated actionable insights to interdisciplinary teams

### ADVANCED HEALTH CARE

**Sacramento, CA**

*Certified Nurse Assistant*

*Oct 2021 – Feb 2022*

- Maintained high-accuracy patient data records across 10+ patients, supporting clinical decision-making
- Ensured patient safety and contributed to consistent quality of care metrics

### AEGIS THERAPIES

**Sacramento, CA**

*Restorative Nurse Assistant/Certified Nurse Assistant*

*Aug 2021 – Oct 2021*

- Tracked and documented mobility, strength, and recovery data for 30+ patients, supporting physical therapy plans
- Documented clinical observations with accuracy to ensure reliable patient data

### VALLEY SPECIALTY NURSING

**Sacramento, CA**

*Certified Nurse Assistant*

*May 2021 – Oct 2021*

- Provided daily living assistance while monitoring and recording patient conditions
- Communicated changes in patient behavior and health to nursing staff

### MOUNTAIN COMMUNITIES HEALTHCARE DISTRICT

**Weaverville, CA**

*Certified Nurse Assistant*

*Apr 2020 – Mar 2021*

- Delivered patient-centered care while documenting vitals, I/O, and behavioral metrics for 15+ patients per shift
- Prepared patients for procedures and maintained safe environments