

Anthony Cortez

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EDUCATION

SAN DIEGO STATE UNIVERSITY

Bachelor of Arts

Major in Economics: Distinction in Economics

San Diego, CA

June 2013

SAN DIEGO STATE UNIVERSITY

Masters of Science

Major in Statistics

San Diego, CA

May 2024

WORK EXPERIENCE

San Diego State University

Report Production Analyst

San Diego, CA

Sep 2024 – Current

- Wrote SQL queries to generate status reports and fulfill ad-hoc data requests for clients.
- Built an Excel dashboard to visualize daily report volume, team productivity, and compliance metrics. The tool helped my supervisor schedule new reports and monitor compliance with evolving requirements.
- Used Power Automate to streamline execution of multiple SQL queries and forecast next-day report volume, improving accuracy and reducing manual work.

Research Assistant & TA

Aug 2023 – Sept 2024

- Fall 2023: Assisted Dr. Xialu Liu in validating her **Time Series Model** (SARIMA) on current data. The model forecasted the impact of Covid-19 on tourism in Hawaii. Using **R** I downloaded the current data, tested different **intervention effects**, and compared the AIC values. Determined the SARIMA model with damping and permanent effects was the best.
- Spring 2024: Assisting Dr. Xin Wang in analyzing and improving US Agriculture crop estimates.
- Teacher's assistant for STAT 119 A/X. Reviewed statistical concepts with 10-20 students for two sections per semester.

San Diego City College

Mathematics Tutor

San Diego, CA

Jan 2023 – Sep 2024

- Tutored community college students in **College Algebra, Trigonometry, Calculus** and **Statistics**.
- Analyzed student data and created visuals in **Excel** that showed how the increase in students attending the center and what type of tutoring they were seeking. This led the center to hiring more tutors with a focus on certain expertise.

Serco

Program Analyst (Secret Clearance)

San Diego, CA

Mar 2018 – August 2022

- Created a **VBA** script to automate the daily reporting of NAVY recruiting statistics in **Excel**.
- Utilized **Key Performance Indicators** to monitor and reward performance for our recruiters.
- Responsible for briefing the Commanding Officer and other leaders on recruiting performance and trends.

PROJECTS

Machine Learning Engineer Baseball Wins Prediction

- Analyzed over 1GB of baseball data containing tables with millions of rows.
- Created a baseball prediction model. Implemented feature engineering by evaluating the **P-value** and **Correlation Matrix** of each feature. Then used **Scikit-learn** to test different classification models such as **random forest**, **logistic regression**, and **k-nearest neighbor**. Picked final model based on AIC. The model had over a 50% win rate.
- Used **PySpark** to upload data to **MariaDB** and **SQL** for data manipulation. Created an automated **Docker** pipeline.

Employee Attrition (Survival Analysis)

- Used a **Cox-Proportional Hazard** model on employee data (Kaggle) to better understand when an employee will quit and what the contributors are.

ADDITIONAL

Technical Skills: Python, R, SAS, C ++, Pandas, NumPy, Matplotlib, SQL, Excel, VBA, Git

Machine Learning: Linear Regression, Time Series, Data Mining, Neural Networks and Optimization

GitHub: <https://github.com/AnthonyWilson1>

LinkedIn: <www.linkedin.com/in/anthony-cortez-0517aa6b>