

Mark Barranda

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Education

University of California, Berkeley

Expected Graduation: May 2025

B.A. Data Science

Relevant Coursework: Foundations of Data Science, Principles & Techniques of Data Science (Python, SQL, ML), The Structure and Interpretation of Computer Programs (Python), Data Structures and Algorithms (Java, SQL), Linear Algebra, Probability in Data Science, Intro to Cognitive Science, Geospatial Information Systems

Fullerton College

Graduation: May 2022

AA - Interdisciplinary Studies w/ Emphasis in Math & Science

Relevant Coursework: Introduction to Programming(C++), Research Methods in Psychology, Brain & Behavior, Social Psychology

Data Science Projects

The Nature Conservancy (Contract), Data Science Consultant

January - May 2024

- Leveraged Kling Gupta Efficiency (KGE) metrics to **optimize predictive accuracy** of stream flow levels in California rivers, enhancing water resource management strategies and decision-making processes
- Led the **Exploratory Data Analysis (EDA)** on vast datasets sourced from the National Land Cover Database (NLCD), elucidating actionable insights to enhance the team's comprehension of feature utilization, thereby optimizing model accuracy across diverse applications.
- Cultivated effective communication and collaboration skills through frequent interdisciplinary teamwork

World Wildlife Fund (Contract), Data Science Consultant

September 2023 - December 2023

- Spearheaded a comprehensive evaluation of five leading Large Language Models (**LLMs**) to identify the most effective one for summarizing WWF's global accomplishments
- Utilized **Langchain** and **vector databases** for efficient PDF text extraction
- Guided the visualization of WWF's global impact through the integration of **Mapbox**, **Folium**, and **OpenStreetMap** polygons stored in GeoJSON formats. Led the development of an interactive map featuring a search function.

Spam/ Ham Email | Python, Pandas, Regex, Seaborn, Scikit Learn, EDA, Feature Engineering, Classification

November 2023

- Utilized various relevant data science and machine learning techniques to predict whether an email is spam(1) or not spam(0)
- Increased accuracy by 15% by using a heatmap visualization to rule out redundant features based on correlation scores across features, as well as Scikit Learn's GridSearch feature to fine tune my machine learning model's hyperparameter during training and cross-validation
- Achieved ~86% testing accuracy across 8,000+ emails.

Do Laugh Tracks Make Comedy Scenes Funnier? | Qualtrix, Research Methods, Statistical Analysis

April 2022

- Led a small group in conducting basic research utilizing Qualtrix to curate front-to-end user experience under two survey conditions: laugh track and no-laugh track
- Although there were no significant findings in terms of humor score, the control group had a significantly higher score on number of times laughed suggesting that modern day sitcoms with minimal to zero laugh tracks are funnier

Work Experience

Lead Consultant

Anaheim, CA | Walnut Creek, CA

Fedex Office & Print Services

December 2018 - September 2023

- Acknowledged in the company-wide newsletter for the month of April 2022 for an outstanding customer service experience, demonstrating a commitment to sustained excellence even in the height of the pandemic
- Boosted our store's survey performance by 200% after implementing a token system among team members which incentivized my team for going the extra mile of delivering excellent customer service

Volunteer & Activities

- Data Science Society - Social Good Committee
- Golden Bear Orientation Leader
- Psychology Club member at Fullerton College
- La Palma Yearly Run
- Designation for Human-Centered solutions (hosted by Bumble and Adobe)
- The Berkeley Project
- Phi Theta Kappa (Honor Society) at Fullerton College
- Party Planning Committee at FedEx Office

Additional Info

Languages: English (Native), Tagalog (Native)

Certification: CITI - Social and Behavioral Research

Interests: Volleyball, Pickleball, Traveling, Dystopian and Sci-Fi Movies, Fitness, Switch, PC gaming, Interstellar topics, Podcasts, Fantasy novels