Bryan Alexis Ambriz

Portfolio Website: www.bambriz.me
LinkedIn: www.linkedin.com/in/baambriz
GitHub: https://github.com/Bryan-Az

EDUCATION

San Jose State University
Masters of Science in Software Engineering
With Specialization in Data Science
June 2023 - March 2025
Current Student

University Of California San Diego
Bachelors of Science in Data Science
Minors in Cognitive Science & Education Studies
June 2017 - March 2022
GPA: 2.965

LANGUAGES
Bilingual and Fluent in English & Spanish.
Novice to Intermediate in French.

RELEVANT EXPERIENCE - San Diego, CA

Registered Behavioral Technician
TRUE ABA (Applied Behavior Analysis) - (Feb - May 2023)
30 hours/week

ACES (Comprehensive Educational Services, Inc.) - (Oct 2022- Feb 2023).
20 hours/week

- At TrueABA, sessions were home-based. At ACES, sessions were clinic and group based. I provided services to clients to track behavioral data and provided systems to reduce maladaptive behaviors and increase skills with the help of a Board Certified Behavioral Analyst.

COVID-19 Software Research Intern
Scripps Research Translational Institute Internship (Jun-Aug 2022)
La Jolla Shores, California, United States
40 hours/week

- At the Andersen Lab, I analyzed and presented Genetics and Epidemiological data regarding COVID-19 & software development of a new Python package on outbreak.info. This was a summer internship; therefore, I worked with a team of other interns which helped facilitate learning among us. Specifically, I helped translate many of the packages' core functionalities from R to Python. I developed functions that would send requests and parse the data from the outbreak.info API. I also created a function to solve a one-to-many query issue resulting from naming issues across geographical locations using their uniquely identifiable codes. Along the way, I also created unit tests to future-proof the functionality. At the end of the internship, I communicated the results at a poster presentation with my co-interns at Scripps.

Triton Research Experiential Learning Scholarship
UC San Diego · Jan 2020
15 hours/week

- At UC San Diego, I proposed & designed an independent research project which examined human developmental metrics by data analysis of U.S Census Bureau data. I found a correlation between living arrangements and socioeconomic status.

PROJECTS

Outbreak - ***Software Engineering (40 hours/week, Scripps Research Internship)***

- Outbreak.info is a website containing a REST API that is accessible via an R package of the same name. To extend the application of worldwide SARS-Cov-2 data and resources in research, I helped create a new Python package with similar functionality.
- To extract the data, I created a top-level recursive method to request data from many of the major endpoints and serve it to wrapper functions dealing with covid-19 cases, lineage mutation, and genomic data. Thus, the function is generalizable and is able to handle idiosyncratic http URLs and field arguments.
- To deobfuscate naming patterns caused when many locations with the same name exist across administration levels (city, state, country), I implemented a function to help users target specific location codes or general locations.

Particle Physics Result Replication — ***Machine Learning (40 hours/week - 6 months in school capstone project))***

- Implemented a Machine Learning model in Python that takes as input large datasets collected from CERN's Large Hadron Collider for the identification of Higgs Boson particles.
- Utilized UPROOT library to load data remotely, which saves memory by offloading memory usage onto a remote server.
- Utilized awkward library to load tree data from uproot into a usable format that facilitated visualization and ML.
- Evaluated model features using ROC (Receiver operating characteristic) curves. AUC (Area under the curve) of feature with comparison to random (coin flip) feature used for understanding model accuracy.
- The model classified Higgs Boson particles decaying to bb jets with accuracy similar to the published model.

Text-to-Image Generation with A.I — ***Data Analysis (8 hours/week, 8 months independent project)***

- Developed a tool to process and analyze data taken from open-source artwork for insight into Latin American & non-Latin American art.
- Implemented Image Data Feature Extraction, Transformation & Loading (ETL) using PIL package in Python
- Created visualizations of the aggregate color schema of multiple genres.
- Used data from the NGA (National Gallery of Art) database, using data scraping techniques to extract image data from the API & PostgreSQL to query the data.
- To hypothesis test the theory that Latin America has a detectable art style or thematic motif visible within the data and artwork, I am creating a text-to-image model to visualize the art taken from the NGA API using text prompts.
- Implemented a text and image classification model to classify titles according to geographical region.

SKILLS

Programming Languages: Python, Java, HTML, CSS, Matlab, R
Machine Learning: Sci-kit Learn, Pytorch
Distributed Processing: DASK, Apache Spark, Kubernetes
Softwares/Tools: Numpy, Pandas, AWS Services (e.g EC2/S3/EMR/EKS/AppRunner), MySQL, GitHub.

CERTIFICATES

Introduction to Data Science in Python
Completed July 13, 2018
https://coursera.org/verify/D2NBZGZLZU9A

Deep Neural Networks with Pytorch
Completed Jan 2, 2022
https://coursera.org/verify/XUT5BDWHTZD4

Containerized Applications on AWS
Completed May 19, 2023
https://coursera.org/verify/N33C4GDT7CKC