

Francisco Arriaga

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Summary

AI developer specialized in deep learning and computer vision. My work has focused primarily in generative modeling and recommender systems. A mixed background in mathematics, psychology, and computer science allows me to approach problems with technical rigor without foregoing explainability. I leverage years of experience as an academic researcher as well as a Machine Learning contractor and Statistical Research Analyst for industry.

Technical Skills

Languages

Python

SQL

Java

R

JavaScript

Technologies

PyTorch & Tensorflow

Numpy & Pandas

OpenCV & Sci-Kit learn

Docker

Next Js

Concepts

Deep Learning

Computer Vision

Recommender Systems

Artificial Intelligence

Machine Learning

Industry Experience

MediTrak Life, Inc.

Machine Learning Contractor

Dec 2023 – Present

West Lafayette, IN (remote)

- Conceptualized and implemented a system to help regulate blood pressure through behavioral recommendations derived from XGBoost regressors.
- Used 3 different augmentation schemes on extremely sparse patient data, and user transfer learning to personalize the recommender algorithm to each user.

El Paso Community College

Statistical Research Analyst

Jan 2019 – Present

El Paso, TX

- Maintained and queried a database of student academic data using MySQL.
- Established a data pipeline to automatize reporting processes with Pandas.
- Assisted in the implementation of a district wide change of counseling strategy by providing data driven insights.

Research Experience

Graduate Research Assistant | PyTorch, TensorFlow, OpenCV, SciKit Learn, Docker, Numpy

- Designed and implemented a 2D animation inbetweener using Generative Adversarial Networks and autoencoders (Generative Deep Learning - AI).
- Extracted dataset of over 800k triplets (sequence of 3 consecutive frames) directly from scrapped videos using Shot-Detection algorithms.
- Implemented an image retrieval system using pre-trained VGG-19 embeddings.

Undergraduate Research Assistant | LLMs, Java, Python, Pandas

- Implemented a tv-show and movies recommender system integrating personality scores.
- Created databases and established pipelines for 26 million ratings from over 470,000 users.
- Implemented a language-based recommender system using a classical vector space model and pre-trained LLM embeddings.

Education

MS in Artificial Intelligence

University of Texas at El Paso - 2022

BS in Mathematics & Psychology

University of Texas at El Paso - 2019