Kay Ayala

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Summary

I am a Data Scientist with NLP experience. I am fluent in building machine learning pipelines for business objectives. This includes querying, cleaning, and exploring data, building and tuning machine learning and statistical models, as well as building dashboards, and reports. My work ranges from computer vision to time series analysis.

Experience

Data Scientist for AT&T while at Luxoft(DXC) Sept 2021 – Jun 2022

- Data Scientist on the "Insights Engine" **NLP Team**
- **NLP** - Emergency zero shot **classification** using **HuggingFace**
- **NLP** - **Sentiment Analysis** using **HuggingFace Transformers**
- **NLP** - **Topic creation** using Markov Chain/ transition matrices

Optical Character Recognition (**OCR**) for Arabic handwriting Portfolio Project

- Classified handwritten character images: 93% accuracy
- Implemented **CNN** with two convolutional layers each with a pooling layer
- Utilized **python, Tensorflow,** Jupyter Notebooks on **AWS EC2**

Time Series Forecast of Bike Share Data Portfolio Project

- Forecasted ridership on Capital BikeShare data for resource management
- Compared **ARMA**, **ARIMA**, **VAR**, **NN**, and **VAR-ARMA** ensemble in **R**

Performance Comparison of **SVM**, **Decision trees**, and **KNN** Portfolio Project

- Found Linear SVM to have best performance on our datasets
- Written in **python** using **NumPy** and **scikit-learn**

Markov Chord Progression Generator Portfolio Project

- Built generative algorithm which makes chord progressions and then plays them.
- Collected the data to make the dataset and wrote Markov chain in **Python**

Tableau Portfolio Project

- Designed **visualizations** for homeless data in Sonoma County

Education

Southern Methodist University Nov 2018 – Dec 2020
MS in Data Science

University of California, San Diego Sept 2014 – Jun 2017
BS Cognitive Science (**Machine Learning** focus)

Teaching

Taught Introduction to Linear Algebra Winter/Spring 2021

Skills

Python, R, RDBMS, SQL, Spark, Neural Networks, Deep Learning DL, Tensorflow, Docker, Natural Language Processing NLP, NLU, Time Series Analysis, Amazon Web Services - AWS, EC2, Machine Learning models ML, GLM, nltk, HuggingFace, Transformers, NumPy, SciKit-Learn/sklearn, SciPy, pandas, Matplotlib, Git, Github, Shell Scripting, Unix, Linux, Vim, Probability, Statistics, Calculus, Linear Algebra, Experimental Design, A/B Testing, Data Visualization, **Tableau**