# **Phillip Vargas**

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#### **Education**

#### MS, Data Science | National University | San Diego, CA | Dec 2022

• Specialization in Artificial Intelligence (AI), Optimization, & Machine Learning (ML)

#### BS, Accounting | Cal Poly Pomona | Pomona, CA | Dec 2013

• Minor in Organizational Communication

# **Technical Aptitudes**

Programming: Python, R, SQL, SAS, Javascript, HTML

Functional: ETL Flow Design, Tableau, Domo BI, Cloud Computing (AWS, GCP, Azure), NoSQL, MongoDB, Docker, Large Language Models (LLMs), LLM APIs (OpenAI ChatGPT, Google Gemini, Anthropic Claude), MS AutoGen, AI Agents Data Science Packages: Pandas, Numpy, Sklearn, TensorFlow, Pytorch, Keras, Statsmodels, SciPy, Matplotlib, Seaborn Data Science Algorithms: Classification (Logistic Regression, Naïve Bayes, KNN, SVM, Decision Tree, Random Forest), Regression (Linear, Multiple Linear, Ridge, Lasso, Random Forest, SVR), Clustering (K-Means, Hierarchical), Deep Learning (RNN, CNN, Transfer Learning), Natural Language Processing (Transformers, GPT, BERT, LDA)

# **Work Experience**

#### AEG Presents | Data Analyst | Los Angeles, CA | Feb 2021 - Jan 2024

- Led analysis on diverse data sets to derive actionable consumer insights, improving marketing strategies.
- Developed reports and visualizations for strategic decision-making.
- Collaborated with teams to integrate insights, continually adopting emerging data analysis trends and tools.
- Created a digital marketing self-service dashboard that improved reporting efficiency by 40% through consolidating data from several marketing platforms via API.
- Enhanced data integrity in artists primary table by backfilling 75% of missing fields with a logistic regression ensemble model.

#### Airport Van Rental | Financial Analyst | Los Angeles, CA | Mar 2019 - Nov 2020

- Led analytics, forecasting, and reporting initiatives, empowering growth and guiding business decisions through comprehensive data analysis and metric development.
- Collaborated with Fleet, Sales, and Operations teams to implement high visibility analytics projects, enhancing cross-functional decision-making.
- Developed a decision-support model with SQL, MS Excel, Python, and machine learning, aiding company expansion from 4 to 11 locations by predicting rental demand and optimizing fleet cost.

#### Davita Medical Group (Now Optum) | Senior Revenue Accountant | Los Angeles, CA | Dec 2016 - Mar 2019

- Streamlined health plan enrollment recording and reconciliation by site, enhancing accuracy and efficiency in enrollment tracking.
- Managed financial reports by accruing, reallocating, and truing up medical claims expenses, and prepared intercompany transactions to maintain DueTo/DueFrom accounts effectively.
- Developed an automated Physician Bonus Payouts (P4P) system with a unique key mechanism, improving process efficiency and reducing turnaround time by 40%, by enabling real-time bonus balance checks for physicians and regional directors.

#### Kaiser Permanente | Staff Accountant | Pasadena, CA | Mar 2014 - Jun 2015

- Conducted physical inventory reconciliations, ensuring accuracy in financial records through meticulous auditing and verification.
- Streamlined month-end close procedures and enhanced inventory rebate recording and analysis, improving financial accuracy and operational efficiency.
- Enhanced bottom lines by thousands of dollars for multiple Southern California pharmacies by uncovering overpriced pharmacy-to-pharmacy drug transfers inflated by 10x.

# **Project Experience**

## **Predictive Modeling for Content Success**

#### Linear Regression & LLM API | Mar 2024

- **Goal**: To develop a predictive model capable of estimating the success of upcoming Netflix originals, utilizing historical data and various factors.
- **Outcome**: Created a model that assesses the potential success of content by analyzing genre, director, cast, budget, and promotional activities, with ongoing evaluation and refinement for enhanced accuracy.
- Methods: Leveraged historical data to consider key success factors (genre, director, cast, budget, promotional
  activity), applied statistical and machine learning techniques to estimate content success, and implemented
  iterative model refinements based on accuracy evaluations.

### **Van Rental Sales Forecasting**

## Time Series Analysis & Tableau | Jun 2020

- **Goal**: Predict van rental sales demand for a nationally operated van rental company using advanced machine learning techniques.
- **Outcome**: Successfully developed a predictive model that accurately forecasts van rental sales demand, supported by a dynamic Tableau dashboard for reporting and visualization.
- Methods: Converted revenue reports into a time series dataset; trained and evaluated models including Statsmodels ARIMA, Pyramid Auto\_ARIMA, Facebook fbprophet, and Keras LSTM; utilized AWS EC2 machines to enhance computational power and reduce model training time; designed and implemented a Tableau dashboard to visually present data findings.

#### **Probability Distribution Classifier**

### Convolutional Neural Network (CNN) & Statistical Analysis | May 2020

- **Goal**: To accurately classify over 25,000 histogram images into their respective probability distributions using a deep learning approach.
- **Outcome**: Successfully trained a convolutional neural network (CNN) that can classify histogram images into probability distributions, validated by a custom chi-square test algorithm.
- Methods: Generated 25,000+ labeled histogram images for training, using a multi-layered convolutional neural network (CNN) with Keras on AWS EC2 machines for enhanced computational power, and developed a custom chi-square test algorithm for mathematical validation of the classification results.

#### Certifications

AWS Certified Cloud Practitioner Certification | Amazon Web Services (AWS) | Los Angeles, CA | Feb 2021

Data Science Immersive Certification | Galvanize/HackReactor | Los Angeles, CA | Jun 2020