

Miguel Niblock

Data Scientist

Summary

CS experience in various industries: Accounting, film and casino/gaming.
Do **not** require visa sponsorship and willing to relocate.

Personal Info

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Skills

Top Skills:

- Supervised and Unsupervised Machine Learning.
- Classification and Regression.
- Experience with Time Series Forecasting.
- Experience with Anomaly Detection on time-series data.
- Production-quality APIs: Flask, AWS Lambda + API Gateway.
- Containerization and Environments:
 - Docker.
 - *Python*: Conda, VirtualEnvs.
 - *Ruby*: REnv, RVM.
- Experience designing modules for automating data science work.

Languages:

- Python
- Ruby
- SQL (Postgres + Sqlite)
- Neo4J Cypher
- Linux Bash + Fish

Tools:

- Sci-kit Learn
- Pandas
- Numpy
- StatsModels
- Seaborn + Matplotlib
- Flask API
- Keras

Experimental Design:

- A/B & A/A Tests
- Research Proposals
- Defining Key Metrics
- Evaluation and Rollout Plans
- Error Metrics.

Development Best Practices

- Scrum, Agile, Git.

Recent Projects

Time-Series Anomaly Detection (GamingAnalytics)

- Developed Machine Learning module for Anomaly Detection in time-series casino metrics.
- Generates anomaly scores based on forecasting and computing residuals.
- Detected anomalies at various levels of the data hierarchy.

Day-Series Seasonality Forecasting Ensemble (GamingAnalytics)

- Developed an ensemble time series forecasting tool which decreased forecast error from 15% to 4% compared with previous model in production.
- The module internally automates data processing procedures and can be used for general purpose forecasting in any day-series data with seasonality.

Recent Experience

GAMINGANALYTICS

Data Scientist Intern

<Current Position>

- Built a Forecasting Ensemble module, which greatly improved accuracy.
 - Ensemble utilized Holt Winters & Prophet algorithms.
- Anomaly detection module for casino analytics platform.
- Backend API for serving GUI with various analytics modules.
- Modules for multivariate covariance analysis of casino metrics:
 - Used to determine the root cause explanation of anomalies found in time-series data from casino machine logs.
- Closely communicated with CEO to understand business needs for machine learning, and guide development to add value to customers. (Casino Operators).

THINKFUL

Fellow Data Scientist

- Conducted 4 Machine Learning projects under the mentorship of an industry professional.
 - Manipulated and cleaned real-world datasets in preparation for modeling.
 - Presented project and outcomes to live audiences in a product-focused manner, effectively conveying highly-technical information in plain language.
- Wrote complex SQL queries, involving new 'Window' functions.
- Utilized best practices and latest tools for data science work: Jupyter, Git, Google Collaboratory, Kaggle, Conda/ Anaconda.

Education

CALIFORNIA STATE UNIVERSITY, NORTHRIDGE

Bachelor Degree: Electronic Media Management

- CS/ Math Coursework: Statistics, Algorithms, Calculus, Linear Algebra, Data Structures.
- Media Coursework: Audience Analysis, Business Law, Media Regulations, Post Production Management.

Miguel Niblock

Data Scientist

Skills (Continued)

Natural Language Processing:

- Latent Semantic Analysis: TF-IDF Vectorizer Feature Extraction and Singular Value Decomposition.
- Tokenization, Lemmatization, Regex String Methods, TextRank, Word2Vec, Sense2Vec.
- Spacy, NLTK, Gensim, Polyglot.

Business Intelligence Tools:

- Tableau, Google Analytics, Google Data Studio, Adobe Reports, Adobe Analysis Workspace, Interactive Dashboards.

Oral/ Written Communication:

- Product-focused presentations of technical material in plain-language.
- Talented exercise of political diplomacy in corporate culture.

Other:

- Linux & Open Source aficionado.
- Advanced Microsoft Excel.
- Spanish- 100% Written & Verbal

Past Projects

Multivariate Covariance Analysis (GamingAnalytics)

- Productized a module that helps identify the root-cause explanation for an anomaly.
- Is able to rank metrics and/or dimensions based on a calculated "Covariance Share" score.

Deep NLP- Predicting Ad Demand (Thinkful)

github.com/MiguelNiblock/Deep-NLP_Predicting-Ad-Demand

- Predictive model for estimating the deal probability of online classified ads.
- Used PLSR Cross-Decomposition on IDF matrix with Ngrams.
- Big Data: Implemented a memory-management script for successful batch cross-decomposition of a 64k-feature CSR matrix with 1.5 Million datapoints.

Research Proposal- Mental Health in Tech (Thinkful)

github.com/MiguelNiblock/Research-Proposal_Mental-Health-in-Tech

- Investigative exploration of causes for mental illness in tech employees.
- Identification of problem and solution, key metrics, evaluation plan, roll-out plan.

Past Experience

VIACOM

Accounting Data Manager

- Designed and deployed a Digital Time Card automated system; this eliminated manual errors and decreased turnaround times by half in payroll processing.
- Integrated the reporting of daily labor costs ("Hot Sheets") into above-mentioned system, reducing Hot Sheets processing time by half and achieving data consistency across reports.
- Maintained construction budgeting system by routinely updating labor rates for all necessary labor unions, successfully preventing errors when scaling labor sources.

WEINSTEIN CO

Production Assistant

- Digitization and Management of departmental records: Check Requests, Petty Cash/PCard Envelopes, Purchase Orders, Asset List
- Vendor sourcing and relations.
- Managing equipment rentals.