# MARTA LEW

https://marrrta.github.io/

Los Angeles, CA

617.943.9967

marta.k.lewl@gmail.com

linkedin.com/in/marta-lew

## DATA SCIENTIST

Accomplished professional with a history of success and experience using analytics, statistics, and Machine Learning to identify trends, patterns, and irregularities. Known for the ability to leverage story-telling to summarize insights from complex information in clean, digestible visualizations in building compelling narratives for business stakeholders.

### TECHNICAL SKILLS

| | |
|---|---|
| Languages and Environments: | Python, SQL, basic HTML, GitHub, GitHubEnterprise, Google Colab, Excel |
| Packages: | Pandas, NumPy, Matplotlib, sklearn, Scipy, NLTK, BeautifulSoup, TensorFlow |
| Data Visualization | Seaborn, Plotly, Tableau, Power BI |
| Modeling | Statistical Modeling, Regression (MLR, Logistic Regression), Classification Models (Logistic Regression, k-Nearest Neighbors, Naive Bayes), Decision Trees, Random Forests, Time Series Analysis, Neural Networks, Image Classification, experiment simulation, bootstrapping and bagging methods |
| Statistics | Statistical Distributions, Discrete Distributions, Continuous Distributions, Probability, Central Limit Theorem, Hypothesis Testing, Bayesian Analysis |

### EXPERIENCE

**Accenture**, Los Angeles, CA                                                    **September 2016 - September 2020**

**Strategy Senior Manager**

Planned and delivered projects for cross-industry clients, incorporating data analysis, stakeholder engagement and communication, and creation of business case. Accomplishments include:

- Defined a digital architecture "North Star" to facilitate securely combining data from a client's internal systems,  third parties, and sensors, including those mounted on vehicles or in plants.
- Engaged with strategy executives and functional leaders in Supply Chain, Engineering, Finance, Marketing, Analytics, and Data Architecture experts to build the blueprint for "digital backbone".
- Fostered faster innovation, compelling data-based products, and advanced targeted marketing.

- Analyzed and made recommendations to improve procurement efficiency and reduce supplier risk.
- Orchestrated three-month team effort to analyze transactional data, processes, systems, and org, benchmarking with KPIs, and created reports, including data visualizations.
- Built comprehensive business case and corresponding implementation plan leading to $300M NPV savings over five years.

- Transformed global engineering processes from document- to data-based.
- Collaborated with Engineers and Leads to define implementation strategy for a transformative approach to designing assets using past project data and data extracted from design standards.
- Confirmed organizational readiness for transition estimated to drive $600M in annual efficiencies.

- Evaluated data-driven strategy for a client considering a pivot to -as-a-service subscriptions.
- Organized comprehensive analysis of market data, investment analyst reports, and competitor information to align the organization on the transition, and  to verify path to 5x valuation increase.
- Verified  the path for a 5-fold increase in company valuation.

- Planned a comprehensive Engineering Optimization effort, including transformation process and organization for R&D, HW, FW, ASIC, program management, and modeling and simulation.
- Derived insights from analysis of data from a global employee survey and historical Eng programs.

- Established a roadmap of initiatives leading to better workforce productivity, increased automation, enhanced availability of data, collaboration, and shortened time to market.

**Strategy Consultant & Manager**, September 2010 - October 2016

Assisted with execution of  multiple client engagements focused primarily on efficiency improvements, e.g.:

- Performed opportunity assessment and mobilization of a large Operational Transformation program.
- Structured procurement data analysis to size benefits, engaged with clients to validate plans and supplement data with additional key information relevant for implementation.

- Performed assessment and planning of a Procurement Transformation effort.
- Prioritized areas of focus through analysis of spend data, processes, policies, and technologies.
- Enhanced information available from ERP data through interviews with stakeholders.
- Defined a roadmap of projects yielding 9% - 15% in annual savings.

**Supply Chain & Operations Consultant**, September 2010 - October 2012

Delivered analyticsl work driving operational improvements for multiple organizations, including:
- Executed procurement analytics and strategic sourcing by creating reusable spreadsheet-based models for several categories comparing bids and business scenarios, driving data-based insights to reduce cost.
- Delivered component analytics and rationalization plans for a global manufacturer by bulding Excel models to analyze component and material data (e.g. regression and clustering) and determine the opportunity to reduce unproductive complexity in product design.
- Validated feasibility of identified opportunities and created plans to implement valid ideas resulting in the reduction of  COGS by 10%-30%.

### DATA SCIENCE PROJECTS

Predicting Future Academy Awards | Binary classifications using Random Forests
- Examined trends in the entertainment industry, with focus on diversity.
- Achieved 99.9% accuracy and recall in predicting nominees and winners (all Oscars & Best Pic).

Western US Wildfire Prediction | Multi-class classification using Neural Networks
- Defined and trained an FNN algorithm to predict 70% of future large wildfires, by location.

Text Classification | Classifier of content source using nltk, Word2Vec, and sklearn models
- Built an NLP classification model for data harvested from two forums  to identify author's gender.
- Created clean datasets, performed tokenization, lemmatization, sentiment analysis, reviewed used vocabulary, ngrams, and emojis, vectorized data and trained estimators.
- Achieved 88% accuracy in classifying text entries according to the author's gender.

Real Estate Pricing | Multiple Linear Regression model using Python
- Performed EDA, data cleaning, feature engineering and selection, and iteratively refined the MLR estimator of housing prices based on cross-validation results.
- The constructed model explained 90% of variability in RE prices and ranked #5 on Kaggle.

### VOLUNTEERING EXPERIENCE

Support during Karma Rescue  adoptions and educational events; Part-time care for dogs at Pooch Hotel and NKLA West LA; Assistance with Paws For Life dog rehabilitation program in a men's prison in Lancaster, CA.

### EDUCATION AND PROFESSIONAL DEVELOPMENT

Data Science Immersive, General Assembly, remote (12-week full-time immersive educational program strengthening Data Science skills including Python, SQL, data cleaning, data visualization, regression models, classification models, web-scraping, APIs, NLP, advanced supervised learning, unsupervised learning, time series analysis, and statistics.)

Leading with Analytics-Powered Strategy, Northwestern University - Kellogg School of Management

Master of Engineering in Logistics, Massachusetts Institute of Technology, Cambridge, MA

Master of Quantitative Methods and Information Systems, Warsaw School of Economics, Warsaw, Poland