

Marta Lew

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As a Consultant-turned-Data Scientist, I use analytics, statistics, and Machine Learning to identify trends, patterns, and irregularities, and combine my experience in story-telling with my talent for summarizing insights from complex information in clean, digestible visualizations in building compelling narratives for business stakeholders.

Skills

Languages/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, Bayes Theorem, Bayesian Analysis

Data Science Projects

Predicting Future Academy Awards | *Binary classifications using Random Forests* (02/2021)

- 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* (01/2021)

- Defined and trained an FNN algorithm to predict future 70% of large wildfires, by location

Text Classification | *Classifier of content source using nltk, Word2Vec, and sklearn models* (01/2021)

- 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 author's gender

Real Estate Pricing | *Multiple Linear Regression model using Python* (12/2020)

- 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

SAT/ACT Analysis | *Exploratory Data Analysis with pandas, matplotlib, seaborn, & scipy* (11/2020)

- Examined popularity and results of SAT & ACT across states and compared acceptance requirements of top academic institutions in the US involving the two tests between 2017-19
 - Quantified the advantage of SAT over ACT in terms of acceptance to elite colleges
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Relevant Professional Experience

Accenture | Los Angeles, *Strategy Senior Manager* (09/2016)-(09/2020)

Responsible for planning and delivery of various projects for cross-industry clients, including:

- Defining a Digital Architecture "North Star" to facilitate securely combining data from internal systems, third parties, and sensors (e.g. those mounted on vehicles or in plants):
 - Engaged with Strategy executives, functional Leaders (Supply Chain, Eng, Finance, Marketing, Analytics), and Data Architecture experts to build the blueprint for their "digital backbone"
 - Fostered faster innovation, compelling data-based products, and advanced targeted marketing
- Analysis and recommendations to improve Procurement Efficiency and reduce Supplier Risk:

- Orchestrated a three-month team effort involving analysis of transactional data, processes, systems, and org, benchmarking with KPIs, and creation of reports including data visualizations
- Built a comprehensive business case and a corresponding implementation plan leading to \$300M NPV savings over 5 years
- Transformation of global Eng 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
- Data-driven strategy evaluation for a client considering a pivot to -as-a-service subscriptions:
 - Organized comprehensive analysis of market data, investment analyst reports, and competitor information to validate the CEO's plan and align the organization on the transition
 - Verified the path for a 5-fold increase in company valuation
- Engineering Optimization including process and organization for R&D, HW, FW, ASIC, Program Management, and Modeling & Simulation
 - Executed 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

Accenture | Boston & Los Angeles, *Strategy Consultant & Manager* (09/2010)-(10/2016)

- 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
- Procurement Transformation assessment and planning:
 - 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 Procurement projects yielding 9-15% in annual savings

Accenture | Boston, *Supply Chain & Operations Consultant* (09/2010)-(10/2012)

- Procurement analytics and strategic sourcing execution:
 - Created reusable spreadsheet-based models for several categories comparing bids and business scenarios, driving data-based insights to reduce the cost of operations
- Component analytics and rationalization for a global manufacturer:
 - Built 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%

Education

Data Science Immersive **2021**

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, **2018**

Northwestern University - Kellogg School of Management, remote

Master of Engineering in Logistics **2010**

Massachusetts Institute of Technology, Cambridge, MA

Master of Quantitative Methods and Information Systems **2004**

Warsaw School of Economics, Warsaw, Poland