Marta Lew

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I am a Data Scientist with a passion for telling data-centered stories. Whether inspired by a business need, research, or simple curiosity, I extract valuable insights through elegant visualizations and accurate predictions. My background in Strategy Consulting helps me identify pertinent questions and possible solutions, and my robust Analytics, Statistics, and Machine Learning skills allow me to reliably derive relevant data-driven conclusions.

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 a 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

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 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