

Melvin Vellera

Experienced Data Scientist (6+ years) • San Francisco • (415)-632-7742

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Education

University of San Francisco

MS in Data Science

San Francisco, CA

Jul 2021 - Jul 2022

Courses: Machine Learning (Python), Deep Learning (Pytorch), Relational Databases (SQL), Distributed Data Systems (MongoDB), Distributed Computing (Spark, AWS), A/B Testing, Data Structures & Algorithms, Time Series Analysis

Maharashtra Institute of Technology

BS in Computer Engineering

Pune, India

Jun 2011 - May 2015

Work Experience

Target - US Retailer

Data Science Intern

Sunnyvale, CA

Oct 2021 - Jul 2022

- **Recommender System:** Given a food recipe, the system recommends a shopping cart, consisting of ingredients, ingredient substitutes, and kitchen gadgets, which is optimized based on quantity and personalized using user's dietary restrictions
 - Achieved mean average precision of around 0.95 using deep learning techniques such as semantic search with dense embeddings and named entity recognition using transformer models (BERT, BM25)

Ascena Retail Group - US Retailer (Ann Taylor, LOFT, Lane Bryant)

Data Scientist

Bangalore, India

Oct 2018 - Mar 2021

- **Product Forecasting:** Provided 6-month sales forecasts for around 180 key products at a weekly level, which were a significant improvement over existing business forecasts reducing error by 5%
 - The forecasts helped in optimizing inventory planning and in cutting down vendor costs (\$850k)
 - Production pipelines were set up using Docker, Kubeflow and Google Cloud Platform (GCP)
 - Forecasts for promotional scenarios were provided using a web app (LightGBM, Prophet)
- **Propensity Modeling:** Built response and churn models for multiple brands, resulting in combined incremental sales of around \$1.8M for multiple campaigns (XGBoost, Random Forest, BigQuery)
- **Price Sensitivity:** Built a UI web app dashboard for analyzing the impact of promotional discounts on key business metrics. The app was used by the business stakeholder in monthly CxO review meetings (Plotly Dash, GCP App Engine)
- **Workflow Automation:** Automated data pulls from disparate databases, optimized code for running on multiple processors, and stored model predictions using notebook automation, saving around 3-4 man-hours per day (SQL, Papermill, Cron Jobs)

Mu Sigma - Indian Consulting Unicorn for Fortune 500 companies

Decision Scientist

Bangalore, India

Jun 2015 – Oct 2018

- **CRM** for a Fortune 5 US Retailer in China: Personalized WeChat and SMS campaigns targeted at around 2M members using RFMB segmentation and market basket analysis (K-means, Apriori, Alteryx, Tableau)
 - Assessed campaign success using A/B tests, and estimated around \$4M in incremental sales over multiple campaigns
 - Co-led a team of 12 members, defined project scope i.e., business & functional requirements (system design, SLAs)

Projects

- **USF Projects:** [Top 5 in Kaggle Competition](#) for Trip Destination Recommendation using Implicit Feedback (Pytorch), Twitter Sentiment Analysis (Jinja, Flask), Song Recommender System using 50+ GB of data (AWS, MongoDB, Databricks)
- **Personal Projects:** Face detection & identification using computer vision (ResNet, MTCNN), Fantasy team selection using linear optimization and web scraping (PuLP, BeautifulSoup, Selenium)
- **Algorithms from Scratch:** Random Forest, Gradient Boosted Trees & Neural Networks, Matrix Factorization
- **Reports and Articles:** Clustering, Feature Importance, Bootstrapping

Skills

Languages: Python (Scikit-learn, Pandas, NumPy), Pytorch, R, SAS, Git

Visualization: Tableau, Plotly Dash, Matplotlib, Excel, Flask, HTML5, CSS3, JavaScript

Data Engineering: SQL (PostgreSQL, MySQL), NoSQL (MongoDB), Apache Spark, Alteryx

Technologies: GCP (BigQuery, App Engine, Kubernetes), AWS (S3, EMR, EC2), Kubeflow, Docker, Databricks

Awards

Schmidt Family Foundation Scholarship: For using data science to tackle environmental issues

2 Spot Awards in Mu Sigma: For showcasing excellence in 2 data science projects