

MARIAN (SHANTI) SANCHEZ BARBERO

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https://kimshan1.github.io/about_us.github.io/



EDUCATION

MASSACHUSETTS INSTITUTE OF TECHNOLOGY, SLOAN SCHOOL OF MANAGEMENT

Cambridge, MA

Candidate for Master of Business Analytics, Operations Research Center, August 2024

2023-Present

- Coursework: Machine Learning under Optimization Lens, Analytics Edge, Deep Learning, Marketing Analytics
- Machine Learning Project: Programmed a CNN model to detect malicious smart contracts (Python, Keras, TensorFlow)
- Optimization Project: Designed an Amazon recommendation system based on product ratings and price (Gurobi, Python)
- Deep Learning Project: Authorship Prediction and Personalized Text Generation Using Chat Data (OpenAI)
- Activities: MITxHarvard Women in AI, Women in Management Club, Business Development Club

MEXICO AUTONOMOUS INSTITUTE OF TECHNOLOGY

Mexico City

Master of Data Science, Bachelor of Science in Business Engineering & in Industrial Engineering

2017-2023

- Coursework Master: Computer Vision, Bayesian Modeling, Reinforcement Learning, Casual Inference
- Coursework: Logistics, Data Mining, Statistics & Probability, Finance, Econometrics, Business Strategy, Data Structures
- Thesis: Methodology for Sentiment Analysis in Twitter using Python, Applied to Electric Cars (Scikit-learn, NLP)

TECHNICAL SKILLS

- Python, R, Julia/JuMP, SQL, Hive, QGIS, MATLAB, Tableau, Looker, Power BI, Azure Open AI, Autogen, Langchain, Git

EXPERIENCE

MIT SLOAN | DOOSAN BOBCAT CAPSTONE PROJECT

Cambridge, MA

Data Scientist

Feb 2024-Present

- Developed multi-agents to extract and aggregate web data: YouTube, Web Pages & Reddit (Autogen, Apify & Bing)
- Implemented sentiment analysis based on product value curves offering insights into consumer perceptions (OpenAI)
- Utilized statistical & machine learning algorithms to identify key trends and patterns that influence market share (Tree Models, PCA, Lasso Regression, VIF, Recursive Feature Elimination, etc.)

MIT SLOAN | OPERATIONS RESEARCH

Cambridge, MA

Research Assistant under Professor Georgia Perakis

Sep 2023-May 2024

- Conducted an in-depth analysis of promotion strategies for BigC, the largest retailer in Thailand, to enhance the profitability of fabric softeners aiming to predict the quantity sold based on various features (pricing, promotions, sales patterns, etc.)
- Developed features that capture the impact of pricing sessions, past sales trends, and promotional activities
- Identified key drivers of sales quantity, providing insights into which features have the most predictive power

MIT SLOAN | ASIAN WOMEN FOR HEALTH

Cambridge, MA

Analytics Lab Team Member: finding patterns in large health survey data

Sep 2023-Dec 2023

- Built a Decision Tree Classification Model to explore the intricate relationship between social determinants and health care insurance within Asian communities (Python, Tableau)
- Analyzed relationship between social determinants and stress level within cultural communities to tailor training programs
- Identified cohorts to target for education, awareness, and development of community resources on health insurance

DIDI

Mexico City

Operations Analyst

2021-2023

- Conducted a geofence strategy promotion based on density of demand increasing trip growth by ~3% (SQL, Python, QGIS)
- Increased ROI 10% by implementing a cohort strategy “do X get Y” to incentivize supply (Casual Inference, Bootstrapping)
- Communicated findings and recommendations to stakeholders through detailed reports and presentations, facilitating data-driven decision-making (Looker, Tableau, D3.js: JavaScript library for interactive visualizations)
- Developed and implemented user experience surveys and conducted interviews to measure product performance and user satisfaction (Panel Interview, Conjoint, Cluster Analysis)

MORGAN STANLEY

Mexico City

Equity Research Analyst - Intern

2020-2021

- Created valuation and forecasting price models to build portfolio insights (Python)
- Developed a forecasting model for cement prices and a descriptive analysis for potential bridges reconstruction in the US (R)

ADDITIONAL INFORMATION

- Languages: Native Spanish, Intermediate Korean, Basic Japanese