Ali Bakhtiari

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RECENT WORK EXPERIENCES

7-Eleven, Irving, TX - *Senior Data Scientist*

MAY 2018 - PRESENT

- **Sales Forecasting:** Developed a hierarchical group of prediction models in Spark to forecast the next 14 days of sale for $\sim9K$ stores and $\sim2K$ products (per store) every day ($\sim20M$ predictions per day). Devised custom algorithms to infer stockout, estimate sales in an out-of-stock event, and adjust sales based on hourly sales potential curves derived from a fully-stocked model. Also, devised an algorithm to handle decimal points when rounding sales predictions. Out-Of-Stock and Write-off counts were reduced by 9.2% and 7%, respectively, and total sales ($) increased by 2.3% (compared to control stores). Involved in 40 deployments over three years. Managed a team of two people.
- **Assortment Optimization (in progress):** Developing an opportunity-cost-based model to identify and remove slow sellers in each product category. Devised an assortment optimization function to suggest replacement products that maximize a combined KPI index. Used store similarity scores as a proxy for demand similarity, estimated the scores based on a set of different dynamic and static store features where the target variable is assortment overlap. Right now preparing the PoC.
- **New Product Placement:** Developed an end-to-end application with an API endpoint that takes a product name and a region (state or city) and responds with a rank-ordered list of zip codes with the highest potential sales. Built a learn-to-rank model and trained it on the sales data. Collected competition data from external APIs and used it as part of the features. Developed a food embedding model for new products for which no sales data is available. The API is deployed internally to be used by the Merchandising team. Managed a team of three people.

AT&T Inc., Plano, TX - Big Data Engineer

MAY 2017 - APR 2018

Verizon Communications Inc., Irving, TX - Data Scienctist

MAY 2015 - MAY 2017

EDUCATION

The University of Texas at Dallas, Richardson, TX — Ph.D.
Management Science

Sharif University of Technology, Tehran, Iran — MBA
General Management

University of Tehran, Tehran, Iran — BS
Mechanical Engineering

PERSONAL PROJECTS

Real Estate Investment Analyzer - A Streamlit App

A Streamlit app for residential real estate investing. [GitHub Repo]

Churn Analytics in Spark

A churn estimation framework when churn event is not obvious. [GitHub Repo]

Food Embedding

A food embedding model that only uses food ingredients data. [GitHub Repo]

RELEVANT COURSEWORK

Bayesian Statistics

Probability and Stochastic Processes

Advanced Econometrics

Marketing Engineering

LANGUAGES & DevOps

Python	★★★★☆
PySpark	★★★★☆
SQL	★★★☆☆
Git	★★★☆☆
Model Registry	★★★☆☆
Containerization	★★★☆☆
REST API	★★★☆☆
HTML/CSS/JS/React.js	★★☆☆☆
Flask & Django	★★☆☆☆
MLflow	★★☆☆☆
Testing in CI/CD	★★☆☆☆
Microservices	★★☆☆☆

CERTIFICATES

Introduction to ML in Production
(Coursera)

Azure Fundamentals
(Microsoft Certified)

Neural Networks and Deep Learning
(Coursera)

Machine Learning
(Coursera)

ONLINES COURSES

Self-Driving Car Engineer
(Udacity)

Robotics
(Udacity)

Deep Reinforcement Learning
(Udacity)

Web Applications & Software Architecture
(Educative.io)