Ali Bakhtiari

Website: alibakh62.github.io, **Cell #:** 214-991-4537, **Citizenship Status:** Green Card

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 $\sim 9K$ stores and $\sim 2K$ products (per store) every day ($\sim 20M$ predictions per day). Devised custom algorithms to infer stock-out, 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 Scientist

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]

Churn Analytics in Spark

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

Food Embedding

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

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)

SELECTED ONLINE COURSES

System Design
(ByteByteGo)

Robotics
(Udacity)

Deep Reinforcement Learning
(Udacity)

Web Applications & Software Architecture
(Educative.io)