EBI BARZEGARY

Ph.D. Quantitative Marketing

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SUMMARY

Resourceful and Innovative individual with a strong background in computer science and engineering, extensive education in business, and a solid understanding of marketing. Used state-of-the-art machine learning tools for prediction, treatment effect estimation, causal inference, and personalized policy design tasks. Proven track record of working on novel problems with the experience of designing and coding an open-source machine learning algorithm.

PROFESSIONAL EXPERIENCES

Business Analysis Manager

Media Measurement and Attribution

T-Mobile

March 2022 - ongoing | Bellevue, WA

- Design and development of **multi-touch attribution** solution for TV advertising.
- Build data ETL using **Alteryx** and data visualizations using **Tableau**.
- Work with **iSpot** TV ad measurement data to derive insight for budget allocation optimization.

Data Science Research Intern

Adobe

Summer 2017, 2018, 2019 | San Jose, CA and Seattle, WA

- Research collaboration opportunity focused on open-ended questions on customer acquisition and retention in **SaaS** business model.
- Designed a personalized free trial length assignment policy that led to a 6.8% increase in post-trial subscription rate in offline evaluation metric.
- Used **Spark** and **Hive** to query into **Hadoop** database system.
- Designed a new algorithm for the novel problem of modeling customers' dynamic choices in high-dimensional settings. Reduced estimation bias by as much as 40% compared to traditional estimation approaches in simulation studies.

Co-founder and Senior Full Stack Developer

EPie

Aug 2013 – July 2016 | Tehran, Iran

- Designed and implementation of an extensive code-generator for HTML, ASP.NET and JavaScript using Visual Studio scaffolding.
- Led a 5 member engineer team to design a fully-tailored and integrated payroll and HSE system for SAIPA corporation using agile methodology.
- Implemented a single-page MVVM front-end architecture using KendoUI.

Research assistant

Social Neuroscience and Psychopathology research group

Jul 2011 - Apr 2013 | Tehran, Iran

- Worked on evolution of prosocial behavior using genetic algorithms.
- Developed software applications for analyzing decision making in human subjects using Java.
- Collaborate with researchers with a variety of backgrounds including Psychology, Medical and Social Sciences.

EDUCATION

Ph.D. in Quantitative Marketing (STEM degree)

Foster School of Business, University of Washington

Sep 2016 – Dec 2021

Minors in **Computer Science** and **Economics**
Dissertation: Essays on Algorithms for Customer Acquisition and Retention in SaaS Business Model

Master of Business Administration (MBA)

Sharif University of Technology

Sep 2014 – Jun 2016

B.S. in Computer Engineering

Sharif University of Technology

Feb 2009 – Sep 2013

Thesis: An Evolutionary Model for the Coevolution of Cooperation and Response to Inequity."

AWARDS

- James B. Wiley Endowed PhD Fellowship
  University of Washington (2020-2021)
- G. Furukawa Distinguished Leader Fellowship
  University of Washington (2016-2020)
- **Silver Medal** in INOI
  National competition in algorithm design, data structures, discrete mathematics, and programming (2007)

SKILLS

Python | C++ | Java | R

ASP.NET | JavaScript | HTML | CSS

SQL | Spark | Tableau | Alteryx

Machine Learning | Personalization | Structural Modeling | Causal Inference | Treatment Effect Estimation | A/B testing

Algorithm Design | Data Structures | Discrete Mathematics | Graph Theory

Software Development | Debugging | Project Management | Agile methodology | Problem Solving | Source Control

OTHER

Creator of RePaD algorithm (url)
RePaD is a dynamic discrete choice modeling algorithm in high-dimensional settings. RePaD repository includes several tools for dynamic discrete choice modeling in python.

Coursera Deep Learning Specialization
Familiar with RNNs, CNNs, image processing and NLP.
Familiar with transfer learning.

Ad-hoc Reviewer
For *Marketing Science*, and *Quantitative Marketing and Economics* journals

FCAC lab administrator
Design the Foster Customer Analytics Center website (url), and maintain the high-performace computing lab.

RESEARCH

Barzegary, E. and Yoganarasimhan, H., "A Recursive Partitioning Approach for Dynamic Discrete Choice Modeling in High Dimensional Settings." *Working paper*

Yoganarasimhan, H., Barzegary, E. and Pani, A., "Design and Evaluation of Personalized Free Trials", Forthcoming at *Management Science*.

Barzegary, E., "Essays on Algorithms for Customer Acquisition and Retention in SaaS Business Model." *PhD Dissertation* (2021)

Memari, A.H., Shayestehfar, M., Gharibzadeh, S., Barzegary, E., Hafizi, S. and Moshayedi, P. (2015), "Empathizing and systemizing skills influence risky decision making in children." *Learning and Individual Differences*, Vol 40, pp.22-26.

Akbari, S., Esfandiari, H., Barzegary, E., and Seddighin, S. (2014), "Some Bounds for the Signed Edge Domination Number of a Graph." *Australasian Journal of Combinatorics*, Vol 58(1).