SEYED HAMID TABARI

(479) 439-2334 ◆ Bentonville, AR ◆ seyedhamidtabari@gmail.com ◆ https://shtabari.github.io

EXPERIENCE SUMMARY

Result-oriented professional with expertise in statistical modeling, machine learning, mathematical modeling, deep learning, and Large Language Models, with a proven track record of leading end-to-end projects to enhance the performance of predictive and generative models. Highly skilled in transforming machine proof-of-concepts into scalable production solutions, while demonstrating strong leadership and cross-functional collaboration to consistently surpass quality and performance objectives.

WORK EXPERIENCE

Walmart Global Tech, Bentonville, AR — April 2022 - Present

Senior Data Scientist / Machine Learning Engineer

Project: Financial Planning (Team Leader)

- Led and mentored a cross-functional team of four data scientists and analysts to deliver highly accurate, machine-learning-based quarterly forecasts for Walmart's Omni-Channel departments. Leveraged agile methodologies and fostered cross-functional collaboration to achieve $4M in cost savings and reduce associate workload by 152 hours per quarter.
- Designed, distributed, and scaled machine learning algorithms on Google Cloud using Apache Airflow, API-based programming, and Kubernetes Engine, achieving an 80% reduction in runtime and enhancing operational efficiency.
- Developed and implemented an advanced forecasting ensemble model, integrating Bayesian methods, boosting techniques, and deep learning models to replace a manual, error-prone financial planning Excel process. This innovation reduced forecasting errors by 18% and improved decision-making accuracy.

On the Job Skills

- Team Leadership
- Agile Team Management
- Strategic Decision-Making
- Cross-functional Collaboration
- Forecasting
- Time-Series Analysis
- Machine Learning
- Bayesian Statistics
- Airflow

Project: GenAI-Powered Maintenance Optimization

- Spearheaded the development of an intelligent facilities management system leveraging advanced NLP techniques, fine-tuned DistilBERT, FAISS indexing, and Fusion Retrieval-Augmented Generation (RAG) pipelines integrated with GPT-4.
- Facilitated seamless cross-functional deployment through API integrations, enabling scalable AI solutions for field operations, enhancing technician onboarding, and improving resolution speed and accuracy while minimizing hallucinations and ensuring reliable, up-to-date outputs.

- LLM
- Finetuning
- Fusion RAG
- Vector Database
- Semantic Search
- Hugging Face

Project: Productionization of Demand Score Project

- Designed and deployed ML workflows for the Demand Score Project, transitioning from development to production using Airflow, Docker containers, Kubernetes, Serverless Spark, and Ray distributed cluster, which fully automated the project and cut labor costs by 80%.

- MLE / MLOPS
- GCP / VertexAI
- Pyspark / DataProc
- Ray
- Kubernetes
- Docker / Container

Project: Item – Store level forecast

- Developed and finetuned deep learning sequence (RNN and Transformer-based) model to predict forecasts for every item at store level, which equals to 540 millions forecast combinations annually.

- Tensorflow
- Pytorch lightening
- Transformer / RNN

Walmart Global Tech, Bentonville, AR — June 2020 - March 2022

Data Scientist

Project: Sales Forecast and Business Planning

- Designed and implemented Entity Relationship (ER) Diagrams to efficiently integrate data from diverse sources, optimizing data preparation for machine learning algorithms using SQL. This led to a 60% improvement in ETL pipeline performance and streamlined data workflows.
- Utilized causal inference procedure (Causal Forest) to detect and measure main sales drivers such as products' horizontal facings for modular changes and retail prices for markdowns
- Built and optimized time-series dashboards to visualize data and key findings via Tableau which provides insightful recommendations to business stakeholders to solve business problem.

On the Job Skills

- BigQuery
- Rational Database
- Causal Inference
- Tableau

Project: Product Substitute Recommendations Levering Image Recognition

- Spearheaded a deep learning substitute recommendation model levering CNN and RNN for General Merchandise and Consumables & Food categories.
- Implemented a natural language processing model to unify products descriptions, improving test accuracy of the recommendation model up to 94%

- Computer Vision
- NLP
- Linux
- Recommendation Model

UNIVERSITY OF ARKANSAS, Fayetteville, AR September 2016 - September 2019

Research Assistant (Machine Learning Researcher) (Department of Chemistry)

- Enabled a team led by Head of Chemistry Department to save 60% of their resources by employing a reusable machine learning algorithm (fuzzy clustering) to address their business need of medicine pattern recognition
- Mentored and coached three analysts and programmers in conducting machine learning techniques on biological datasets, resulting in their paper publications

On the Job Skills

- R
- Python
- Object Orient Programming

EDUCATION

UNIVERSITY OF ARKANSAS, Fayetteville, AR 2018 - 2020

Master of Science in Statistics and Analytics (Minor in Computer Science), GPA= 3.9/4.0

Tarbiat Modares University, Tehran, Iran 2014 - 2016

Master of Science in Nanophysics, GPA=3.9/4.0

PUBLICATIONS

Journal Papers:

- Tabari, S. H., Jamali, Y., & Poursalehi, R. (2015). Multi-scale simulation of carbon nanotubes interactions with cell membrane: DFT calculations and molecular dynamic simulation. Procedia Materials Science, 11, 423-427.
- Harkey, T., Govind Kumar, V., Hettige, J., Tabari, S. H., Immadisetty, K., & Moradi, M. (2019). The role of a crystallographically unresolved cytoplasmic loop in stabilizing the bacterial membrane insertase YidC2. Scientific reports, 9(1), 1-12.

Conference Posters:

- Polasa, A., Tabari, S. H., & Moradi, M. (2021). Developing Efficient Transfer Free Energy Calculation Methods for Hydrophobicity Predictions. Biophysical Journal, 120(3), 115a.
- Isu, U., Tabari, S. H., Kumar, V. G., & Moradi, M. (2020). Effect of Cholesterol on the Structural Dynamics of Metabotropic Glutamate Receptor (MGluR1): A Molecular Dynamics Study. Biophysical Journal, 118(3), 525a.
- Hettige, J., Tabari, S. H., & Moradi, M. (2018). Lipid-Dependent Alternating Access Mechanism of a Bacterial Multidrug ABC Transporter: A Molecular Dynamics Study. Biophysical Journal, 114(3), 461a.
- Tabari, S. H., Hettige, J., & Moradi, M. (2017). All-Atom Molecular Dynamics Simulation of Stealth Liposomes. Biophysical Journal, 112(3), 75a.

ACCOMPLISHMENTS

- **Work Award** Exemplary performance award, securing the top performance ranking achieved by top 1% of employees.
- **Certificate** Natural Language Processing Specialization by DeepLearning.AI
  Link: https://coursera.org/share/37e66f01f106cc318ae8c2252e18cd1d
- **Certificate** Generative AI with Large Language Models by DeepLearning.AI
  Link: https://coursera.org/share/06c7dfb1a26cd72f36bdfd1d8730040f
- **Certificate** Object-Oriented Design by University of Alberta
  Link: https://coursera.org/share/5a435cf23c3c90946b4342c9d7612e12
- **Certificate** Operations Research by National Taiwan University
  https://coursera.org/share/264c4f30d2ea1c2bf23fd627449b6083
  https://coursera.org/share/2bc11a1da00fecf5e314fd28adb5ac2b
  https://coursera.org/share/a0b4c9889b2733987beeb116e57e8ccc