SEYED HAMID TABARI

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EXPERIENCE SUMMARY

Result-driven professional with experience in statistical modeling, machine learning, deep learning, and Large Language Models

- Lead projects to investigate and increase the effectiveness of predictive and generative models.
- Design and develop solutions to productionize ML proof-of-concepts

Expert in natural language processing and analytical tools, database management, programming languages, data mining, and process improvement. Strong leader and quick learner consistently exceed performance & quality goals.

- ✓ LLM/NLP Deeplearning.AI Certificates
- ✓ Deep learning, Computer Vison, Natural Language Processing, Machine learning, Distributed Computing
- ✓ SQL, Tableau, Alteryx, KNIME, Redis, RestAPI, PyTorch, Tensorflow, Pandas, Scikit-learn, Airflow, Spark, FastAPI, OpenCV, Docker Container, Transformers, Langchian, Streamlit, Ray.

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

WORK EXPERIENCE

Walmart Global Tech, Bentonville, AR — April 2022 - Present
Senior Data Scientist / Machine Learning Engineer

Projects: Productionization of Demand Score Project

- Designing and deploying 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%.

Projects: Text to SQL

- Specialized in optimizing Language Model Models (LLMs) on Walmart datasets to convert textual information into SQL codes, speeding up providing valuable insights to Merchants.

Projects: Financial Planning

- Leading Financial-Planning project producing accurate ML-driven quarterly forecasts for Omni-Channel Walmart departments, saving $4M and 152 hours per associate quarterly.

Projects: Item – Store level forecast

- Developed and finetuned deep learning sequence model to predict forecasts for every item at store level, which is 540 million forecast units equal to $9B annually.
- Designed and implemented forecasting framework/pipeline to automate geo-demand forecasts.

On the Job Data Skills

MLE / MLOPS:	★★★★★
OOP:	★★★★★
RAY:	★★★★★
Docker:	★★★★★
RestAPI:	★★★★★
Spark:	★★★★★
TensorFlow:	★★★★★
GCP:	★★★★★
LLM:	★★★★★
NLP:	★★★★★
Kubernetes:	★★★★

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

Projects: Sales Forecast and Business Planning

- Developed a forecasting ensemble model including Bayesian, boosting, and deep learning models to replace the manual and error-prone financial planning tools, saving $24M labor cost.
- Optimized and scaled up machine learning algorithms on Google Cloud via Airflow Apache plus API based programming and Kubernetes Engine, shortening runtime by 80%.
- Created and implemented Entity Relationship (ER) Diagrams to collect data from diverse sources, preparing them for machine learning algorithms using SQL.
- 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 and Python Dash, which provides insightful recommendations to business stakeholders to solve business problems

Projecst: 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%

On the Job Data Skills

BigQuery:	★★★★★
PyTorch:	★★★★★
Machine learning:	★★★★★
Cloud Computing:	★★★★★
Python:	★★★★★
Deep learning:	★★★★★
Computer Vison:	★★★★★
Tableau:	★★★★
SQL:	★★★★
NLP:	★★★

- Automated data integration, acquisition, and preparation processes from multiple resources to construct proper train/test datasets for deep learning & machine learning usages.

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 Data Skills

R:	★★★★★
Python:	★★★★★
Java:	★★★★

TARBIAT MODARES UNIVERSITY, Tehran, Iran — September 2014 – August 2016
Research Assistant (Department of Materials Engineering)

- Performed machine learning and statistical analysis methods (Regression and Maximum Likelihood) on both structured & unstructured datasets to investigate the effectiveness of two new antibiotics
- Created a density heatmap to depict the cell membrane disturbance in presence of new antibiotics to quantify antibacterial mechanism, exploring the most effective antibiotic for upcoming projects

On the Job Data Skills

Database:	★★★★★
Linux:	★★★★★

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

- **Certificates** Natural Language Processing Specialization by DeepLearning.AI
  Link: https://coursera.org/share/37e66f01f106cc318ae8c2252e18cd1d
- **Certificates** Generative AI with Large Language Models by DeepLearning.AI
  Link: https://coursera.org/share/06c7dfb1a26cd72f36bdfd1d8730040f
- **Certificates** Object-Oriented Design by University of Alberta
  Link: https://coursera.org/share/5a435cf23c3c90946b4342c9d7612e12
- **Work Award** Exemplary performance award, securing the top performance ranking achieved by top 1% of employees.
- **Scholarship** from Department of Mathematical Sciences for the most outstanding academic excellence
- **Teaching assistantship experience:** Customized tutoring lessons for 100+ students in all mathematics and statistics courses by analyzing their grade records, enhancing their performance by average 35% after one month.