

Mehdi Korjani

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Summary of Qualification

VP of Global Data Science at Capital Group, Technical Manager, over 15 years of experience in machine learning development and deployment in production environment, leading more than 10 data scientists and data engineers, build scalable and resilient AI/ML services and platforms, articulate vision throughout organization and different teams

- Skills: build ML platforms with customer focus, team management, mentoring and partnering across the company
- Technical Skills: Deep Learning, LLM, GPT, NLP, Machine Learning, Recommendation Systems, Information Retrieval, Descriptive and Predictive models, and Optimization
- Programming: PyTorch, Tensorflow, Keras, Spark, Python
- Experienced in Google cloud platform (GCP certificate), Amazon AWS, Microsoft Azure
- Research Skills: Excellent mathematical and statistical machine learning analysis and independent research skills

Experience

Capital Group, Data Scientist Manager, Los Angeles, CA 2018-present

- Lead high performance team of data scientists to support organization to better understanding clients and deliver products through leveraging machine learning, data analysis and engineering
- Lead Generative AI transformation of organization, Product principles to guide GenAI adoption, Practical actions to onboard and align the Organization
- Develop GPT models for sales, marketing, investment groups using Rag, Agentic, and finetune models
- Developed trusted AI platform for safety, reliability, and robust performance of Gen AI models that go to productions
- Developed Deep Learning revenue/price prediction model with combination of alternative and financial data using deliver to investment group
- Developed time series product recommendation and behavioral prediction based on historical financial advisor data, delivered sales leads to improve sales and reduce redemption
- Developed Portfolio construction tool in production with generative text/video insights, delivered to financial advisors to optimize their portfolios
- Developed financial news recommendation platform for financial advisors in production environment, using multiple deep learning, NLP and machine learning models, working closely with key business analytics leaders, and executive management
- Developed information retrieval model and cognitive search in production environment on Enterprise corpora

KPMG, Senior Data Scientist, Irvine, CA 2017

- Developed hybrid recommendation engine based on deep learning algorithms
- Developed personalized dialogue based personal assistant using NLP and deep learning
- Developed machine learning algorithm to extract protected health information PHI from medical records using OCR and NLP

Oben Artificial Intelligence, Research Scientist, Pasadena, CA 2016

- Developed lyrics generation model using attention based seq2seq deep learning algorithms, word2vec, natural language translation and classification.
- Speech enhancement and voice activity detection using deep Learning algorithms to remove background noise from speech data, patented on Feb 2017.
- Speaker verification and identification using machine learning algorithms to determine speaker identify, patented on Sep. 2016

Chevron Inc., Post-doc Researcher, Bakersfield, CA 2015

- Developed Deep Learning Neural Network for reservoir modeling and prediction of oil production, published 2 peer-reviewed papers

- Developed adaptive non-linear regression algorithm for fracture optimization for unconventional reservoirs, published a patent on Dec. 2015

National Science Foundation (NSF), Co-Principal Investigator, Los Angeles, CA 2014-2016

- Develop algorithms for creating sense of touch, over the air, using high frequency ultrasound transducers, won first place, NSF I-Corps Georgia Tech cohort

CiSoft, Research Assistant, Los Angeles, CA 2010-2015

- Intelligent Knowledge Acquisition Systems: From Descriptive to Predictive Models
- Developed a parametric nonlinear regression method for forecasting multivariate function
- Modeling databases and generating rules/patterns from data, summarized a model in linguistic format
- Developed a causality model to find the combination of causal conditions for a desired outcome

Medtronic Inc., Data Science Intern, Northridge, CA Summer 2014

- Developed a new algorithm for modeling Continuous Glucose Monitoring (CGM) using the Unscented Kalman filtering, patented on Dec. 2015

Education

- Post-doctoral researcher, University of Southern California Jun. 2016
- Ph.D., Electrical Engineering, Signal Processing, University of Southern California, GPA: 3.87 Aug. 2015
- M.Sc., Electrical Engineering, Signal Processing, University of Southern California, GPA: 3.92 May 2013

Teaching

University of California, Berkeley, Tutor, Artificial Intelligence Strategy, CA Summer 2019

- Implementing an AI strategy, Resource Requirements for Adopting an AI, Identifying Threats

University of California, Irvine, Lecturer, Machine Learning, Irvine, CA Summer 2018

- Instructor of Machine Learning algorithms and modeling methods, designed course materials and assignments

Patents

1. **M. M. Korjani**, “*Deep learning speech enhancement model using dynamic noise profile estimation*,” Application Number: 62461725, filed on Feb. 2017.
2. M. M. Korjani, “*Speaker Recognition Using Deep Learning*,” Application Number: 62393597, Sep. 2016.
3. A. Varsavsky, J. Mung, Y. Lu, and **M. M. Korjani**, U.S. Application No. 14/980114, “*Sensor-unspecific Calibration Methods and Systems*,” Published on Jun. 2017.
4. **M. M. Korjani**, M. Milani, and A. Sarafi, IR52906, “*Real time vehicle tracking system using Thuraya satellite network*,” Granted: Feb. 2009.

Selected Publications

1. **M. M. Korjani**, “Fast Complex Answer Retrieval by Learning to Outline,” Text Retrieval Conference (TREC), 2018.
2. **M. M. Korjani**, A. Popa, E. Grijalva, S. Cassidy, I. Ershaghi, “Reservoir Characterization using Fuzzy Kriging and Deep Learning Neural Networks,” ATCE, SPE 181578, 2016.
3. **M. Korjani**, A. Popa, I. Ershaghi, “A New Approach to Reservoir Characterization Using Deep Learning Neural Networks,” SPE-180359-MS, 2016.
4. A. Bakshi, E. Uniacke, **M. M. Korjani**, I. Ershaghi, “A Novel Adaptive Non-Linear Regression Method to Predict Shale Oil Well Performance Based on Well Completions and Fracturing Data,” WRM, 185695, 2017.
5. J. M. Mendel and **M. M. Korjani**, “On establishing nonlinear combinations of variables from small to big data for use in later processing,” *Information Sciences*, vol. 280, no. 0, pp. 98–110, 2014.
6. **M. M. Korjani** and J. M. Mendel, “Non-linear Variable Structure Regression (VSR) and its Application in Time-series Forecasting,” *IEEE International Conference on Fuzzy Systems (FUZZ-IEEE)*, pp. 497-504, 2014.
7. **M. M. Korjani** and J. M., Mendel, “Fuzzy set Qualitative Comparative Analysis (fsQCA): Challenges and applications,” *Fuzzy Information Processing Society (NAFIPS)*, 2012 (**Best paper award**).
8. **M. M. Korjani**, O. Bazaz, and M. B. Menhaj, “Real time identification and control of dynamic systems using recurrent neural networks,” *Journal of Artificial Intelligence Review*, pp. 1-17, 2008.