Sajjad Amrollahi Biyouki

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EDUCATION

PhD in Industrial and Systems Engineering, minor in Computational Science　2019-present
The University of Tennessee

MSc in Statistics　2019-present
Haslam College of Business, The University of Tennessee

MSc in Industrial Engineering and Management Systems　2014-2016
Amirkabir University of Technology (Tehran Polytechnic)

BSc in Industrial Engineering and Management Systems　2010-2014
Amirkabir University of Technology (Tehran Polytechnic)

EXPERIENCE

Research Assistant in Machine Learning and Operations Research　Jan. 2019 – Present
The University of Tennessee　*Knoxville, TN*

- Develop a novel Blind Deconvolution algorithm for blurred Satellite Images
- Develop deep learning-based blind image deblurring algorithm
- ANN Metamodel-based Simulation Optimization approach for Supply Chain Problem under Uncertainty
- Day-ahead Precipitation Class Prediction via Stacked LSTM Autoencoders
- Develop a Deep Reinforcement Learning to schedule the tasks of Distributed Systems

Teaching Assistant　Jan. 2019 – Present
The University of Tennessee　*Knoxville, TN*

- Applied Data Science (Graduate Course-IE 565)
- Design of Experiments (Undergraduate Course-IE 340)

Business Data Scientist　May 2017 – Nov. 2018
Management Systems Co.　*Tehran, Iran*

- Analyze the customer's business and data to identify their needs
- Develop the customized Dynamics CRM system based on requirements
- Develop integrated customer portals using HTML,CSS
- Data Extraction and Data Wrangling using SQL
- Develop machine learning models to predict and track the customers' loyalty

Research Assistant in Computational Intelligence Lab　Sep. 2014 – Oct. 2016
Amirkabir University of Technology　*Tehran, Iran*

- Develop a data-driven system for thyroid function diagnosis and nodule detectionbased on thyroid images (Radioisotope) using unsupervised image segmentation andmachine learning techniques in Python
- Develop an enhanced unsupervised fuzzy clustering algorithm for image segmentationin Python
- Develop a rule-based decision support system for thyroid lab test data

TECHNICAL SKILLS

Programming: Python, R, SAS, Matlab, Java (ImageJ), HTML, CSS
Libraries: Tensorflow, Keras, Pandas, NumPy, Matplotlib
Database: SQL, MySQL
Developer Tools: Git, Google Cloud Platform, PyCharm, IntelliJ
General: Data Structures, Algorithms, Object Oriented Programming, Problem-solving, Software Design

Publications

- **Sajjad A.Biyouki**, H Hwangbo. "Blind Image Deblurring based on Kernel Mixture".Preprint arXiv:2101.06241, 2021. (Submitted to IEEE Transactions on Image Processing)

- **Sajjad A.Biyouki**, MH Fazel Zarandi. Data-driven fuzzy modeling for thyroid function diagnosis and nodule detection based on radioisotope images .(Revised to re-submit)

- **Sajjad A.Biyouki**, MH. Fazel Zarandi, IB Turksen, Fuzzy Rule-based Expert System for Diagnosis of Thyroid Disease, 2015 IEEE Conference on Computational Intelligence in Bioinformatics and Computational Biology, Niagara Falls, Canada.

Selective Courseworks

Computer Science & Electrical Engineering: Reinforcement Learning, Deep Learning, Digital Image Processing, Machine Learning, Artificial Intelligence and Expert Systems
Industrial & System Engineering: Stochastic Processes, Heuristics in Optimization (Algorithms), Mathematical Programming, Fuzzy Sets in Decision Making and Planning
Business Analytics & Statistics: Bayesian Statistics (Theory), Applied Bayesian Statistics, Data Mining, Categorical Data Analysis, Probability and Mathematical Statistics, Database and Big Data Technologies

Honors and Awards

- Ranked 2nd in GPA among graduate peers in Eco-social Systems Engineering in Tehran Polytechnic, 2016.

- Admitted to Amirkabir University of Technology, Tehran Polytechnic (Second top university in Iran), 2010; 2014.

- Ranked among 0.2% in the nationwide undergraduate entrance exam, 2010.

Professional Service

- Iranian Student Association(ISA)-UTK : President-(2020-2021), Treasurer-(2019-2020)