Saeed Rafieyan

Department of Biomedical Engineering, Faculty of Chemical Engineering, Tarbiat Modares University, Tehran, Iran

Email: raf.biomed@gmail.com

Cell Phone: (+98)912 077 6219

Personal Website: SRaf.ir

Date	Academic Background
2018-2022	Master of Science in Chemical Engineering – Biomedical Engineering Faculty of Chemical Engineering, Tarbiat Modares University GPA: 16.86 / 20
2013 - 2017	Bachelor of Science in Chemical Engineering Faculty of Chemical Engineering, Tafresh University GPA: 15.14 / 20

Research Interests

Applications of AI in Medical and Healthcare, Protein Design Using AI, Drug Discovery Using AI, Bioinformatics, Personalized Medicine, Tissue Engineering

Publications

2024   **Rafieyan, S.**, Ansari, E., & Vasheghani-Farahani, E. (2024). A practical machine learning approach for predicting the quality of 3D (bio)printed scaffolds. *Biofabrication*, 16(4), 045014. https://doi.org/10.1088/1758-5090/ad6374

2024   **Rafieyan, S.**, Boojari, M. A., Setayeshnia, A., Fakhroleslam, M., Sánchez-Ramírez, E., Bay, M. S., & Segovia-Hernández, J. G. (2024). Acetone-butanol-ethanol fermentation products recovery: Challenges and opportunities. *Chemical Engineering Research and Design*, *205*, 640-664. https://doi.org/https://doi.org/10.1016/j.cherd.2024.04.021

2023   **Rafieyan, S.**, Vasheghani-Farahani, E., Baheiraei, N., & Keshavarz, H. (2023). MLATE: Machine learning for predicting cell behavior on cardiac tissue engineering scaffolds. *Computers in Biology and Medicine*, *158*, 106804. https://doi.org/https://doi.org/10.1016/j.compbiomed.2023.106804

2022   Fan, J., Abedi-Dorcheh, K., Sadat Vaziri, A., Kazemi-Aghdam, F., **Rafieyan, S.**, Sohrabinejad, M., Ghorbani, M., Rastegar Adib, F., Ghasemi, Z., Klavins, K., & Jahed, V. (2022). A Review of Recent Advances in Natural Polymer-Based Scaffolds for Musculoskeletal Tissue Engineering. *Polymers*, *14*(10), 2097. https://www.mdpi.com/2073-4360/14/10/2097

Skills

- Supervised and Unsupervised Machine Learning Algorithms
- Deep Learning Algorithms
- Natural Language Processing
- Visualization libraries such as Matplotlib, Plotly, etc.
- Pytorch Framework
- Pandas, Numpy and Sklearn
- Database Development

Academic Experiences

Sep. 2023 - Present

Research Assistant in Dr. Fakhroleslam's research group, working as a Data Scientist.

Feb. 2024 - Present

Actively contributing to developing a domain-based large language model (LLM) using natural language processing (NLP) in the field of tissue engineering under the supervision of Prof. Ebrahim Vasheghani-Farahani.

June 2024 - Present

Collaborating on MLATE V3, the first multi-tissue predictive ML tool for 3D printed tissue engineering scaffolds under the supervision of Prof. Ebrahim Vasheghani-Farahani.

Licenses and Certificates

Neural Networks and Deep Learning	Coursera	[Link]
Data Visualization using Plotly	Coursera	[Link]
Deep Learning with PyTorch: Image Segmentation	Coursera	[Link]
Deep Learning with PyTorch: Object Localization	Coursera	[Link]
Introduction to Genomic Technologies	Coursera	[Link]
Python for Genomic Data Science	Coursera	[Link]

Languages

English: TOEFL 90/120 (R:23, L:25, S:21, W:21), Registered to retake the test on November 24th.

DuoLingo: 110

Industrial Experience

2023-Present

Data Scientist, HiWEB
Customer Segmentation, Churn Prediction, and Customer Behavior Prediction, QA and QC Automation

2021

Data Scientist, YecomSoft
Persian NLP, Persian Text-to-Speech

2020

Django Web Developer Intern, MAPSA

References

Prof. Ebrahim Vasheghani-Farahani
Full Professor, Department of Biomedical Engineering, Tarbiat Modares University
Email: evf@modares.ac.ir
Tel: +98(21)82883338

Dr. Mohammad Fakhroleslam
Assistant Professor, Department of Chemical Engineering, Tarbiat Modares University
Email: fakhroleslam@modares.ac.ir
Tel: +98(21)82883314

Dr. Ahmad Bayat
Assistant Professor, Department of Chemical Engineering, Tafresh University
Emai: bayat@tafreshu.ac.ir
Tel: +98(86)36241326

Dr. Siavash Sattar
Assistant Professor at Randolph College, Lynchburg, VA, USA
Email: ssattar@randolphcollege.edu
Tel: (+1) 434-947-8605