

Saeed Rafieyan

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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”. (Under Review) *Biofabrication*.
- 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.compbimed.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

Current Projects

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.

Developing software for algorithmically designing 3D-printed scaffolds using optimization algorithms under the supervision of Prof. Ebrahim Vasheghani-Farahani.

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 Candidate on September 24th, 2024

Duolingo: 110/160

Persian: Native

Industrial Experience

2023-Present	Data Scientist, HiWEB Customer Segmentation, Churn Prediction, and Customer Behavior Prediction
2021	Data Scientist, YecomSoft Persian NLP, Persian Text-to-Speech
2020	Django Web Developer Intern, MAPSA

References

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Engineering, Tarbiat Modares University
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Dr. Mohammad Fakhroleslam
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Dr. Ahmad Bayat
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