

Milad Razavi-Mohseni
Johns Hopkins School of Medicine
733 N Broadway, Baltimore, MD 21205
milad@jhu.edu

Profile Summary

Computational biologist working with genomics and epigenomics data as well as machine learning models to identify the underlying pathobiology of human diseases.

1. Experienced in working with bioinformatic tools and packages in R & bash
2. Skilled with using genomics and epigenomics data from different databases
3. Highly trained in computer science and medical school courses
4. Good communicator and leader in scientific groups

Education

Ph.D. Candidate in Biomedical Engineering, Computational Biology (**GPA: 4.0**) Aug. 2019 - May 2025
Whiting School of Engineering & Johns Hopkins School of Medicine
Advisor: Professor Michael Beer

Modules: Sparse Representations in Computer Vision and Machine Learning: A+, Principles of Complex Networked Systems: A, Medical Courses: Immunology, Genetics, Hematology, Macromolecules, Cell Physiology, Metabolism

B.Sc. in Computer Engineering, Major: Software (GPA: **19.08/20**) Sep. 2015 - Jul. 2019
Department of Computer Engineering, Sharif University of Technology, Tehran, Iran

Modules: Adv. Bioinformatics: 20/20, Artificial Intelligence: 20/20, Data Structures & Intro. to Algorithms: 20/20, Probability & Statistics: 20/20, Algorithm Design: 19.6/20

Diploma in Mathematics and Physics Discipline (GPA: 19.70/20) Sep. 2010 - Jun. 2014
National Organization for Development of Exceptional Talents - Allame Helli 3 High School

Internships

Summer intern at Very Large Scale Computing Lab, EPFL Switzerland, under the supervision of Prof. James Larus Jul. - Sep. 2018

Summer intern at Department of Medicine, Imperial College London, under the supervision of Dr Becca Asquith Jul. - Sep. 2017

Skills

Programming: Proficient in Python and R; Competent in MATLAB, Java and C++

Bioinformatics & Computational Biology Tools: Bedtools, EdgeR, MACS2 peak caller, HISAT2 aligner, GATK variant caller, FastQC, Gapped-kmer Support Vector Machines

Typesetting: Proficient in \LaTeX

Research Interests

Regulatory Genomics, Epigenomics, Machine Learning, Cancer Research

Publications

Ho, S. W. T, Sheng, T., ... Razavi-Mohseni, M., ... Tan, P. (2022). *Regulatory Enhancer Profiling of Mesenchymal-type Gastric Cancer Reveals Subtype-Specific Epigenomic Landscapes and Targetable Vulnerabilities* under revision in Gut

Sheng, T., Ho, S. W. T., ... , Razavi-Mohseni, M.,... Tan, P. (2021). *Integrative epigenomic and high-throughput functional enhancer profiling reveals determinants of enhancer heterogeneity in gastric cancer*. *Genome Medicine*, 13(1), 158.

Costa Del Amo, P., Debebe, B., Razavi-Mohseni, M., Nakaoka, S., Worth, A., Wallace, D., Beverley, P., Macallan, D., & Asquith, B. (2020). *The Rules of Human T Cell Fate in vivo*. *Frontiers in Immunology*, 11, 573.

Presentation

Razavi-Mohseni, M., Huang, W., Guo, Y., A., Skanderup, A., J. & Beer, A., M. (March 2022) *Identification of regulatory programs controlling activation of heterogeneous transcriptional states in gastric cancer*. Accepted abstract poster for Cold Spring Harbor Laboratory, Systems Biology: Global Regulation of Gene Expression meeting

Awards and Honors

Awarded the **silver medal** in Nationwide Student Olympiad in Computer Engineering by **Iran Minister of Science, Research & Technology, Dr. Mansour Gholami** Sep. 2017

Annual Educational Award of **Iran National Elites Foundation** Feb. 2016 & Jan.2018

Top Student Award of Dept. of Computer Engineering, Sharif University May 2017, March 2018

Ranked **top 0.5%** among +190000 participants in Iran Nationwide University Entrance Exam Jun. 2014

Research Projects

Machine Learning Models for Transcription Start Site Annotation as a part of The Encyclopedia of DNA Elements (ENCODE) Consortium

Identification of distinct DNA binding motifs in eRNA+ and eRNA- candidate cis-regulatory elements (cCREs) of the ENCODE Project

Teaching Assistantship

Teaching Assistant for Engineering Probability & Statistics, Dr A. Sharifi-Zarchi Autumn 2018

Teaching Assistant for Advanced Bioinformatics (Graduate Course), Dr A. Sharifi-Zarchi Spring 2018

Teaching Assistant (Tutor) for Theory of Languages and Automata, Dr M. Izadi Autumn 2017

Teaching Assistant for Numerical Methods, Dr M. Gharib Autumn & Spring 2016 - Spring 2017