Narges Rezaie

Research Asistant at Bioinformatics and Computational Biology(BCB) Lab
Graduated BS Computer Engineering

CONTACT INFORMATION

Birth	July 2, 1996
Address	Motahati alley, Vahid street, Artesh Avenue, Isfahan, 81769-83481, Iran
Phone	(+98) 936-276-5708, (+98) 913-095-8026
Mail	nargesrezaie80@gmail.com
Personal page	nrezaie@ce.sharif.edu http://ce.sharif.edu/~nrezaie/
BCB Lab	http://bcb.ictic.sharif.edu
Skype	narges1241
LinkedIn	Narges Rezaie

EDUCATION

BS in Computer engineering 2014-2018

Sharif university of technology

GPA: 17.07/20

Thesis title: Design Procedure of Blockchain-based Systems

Supervisor: Prof. Hamid R. Rabiee

Diploma in Mathematics 2010-2014

Farzanegan Amin high school, National Organization for Development of Exceptional Talents (Sampad)

GPA: 19.90/20

RESEARCH EXPERIENCE

Computational Biology - The landscape an integrative analysis of long noncoding RNAs in Breast cancer

In this joint project with University of New South Wales, Sydney, Australia, we try to identify significant long non coding RNA in breast cancer. To delineate genome-wide lncRNA expression, get 27914 lncRNAs from FANTOMECAT database. Filtering methodology to this data set were applied, yielding an online data base. Count number of sample mutated and not mutated, and overlapped disease-associated SNPs. To prioritize lineage-specific, disease-associated lncRNA expression, we count number of sample mutated and not mutated to calculate p-value via fisher's exact test. Advisors: Prof. Hamid R. Rabiee and Dr. Hamid Alinejad (University of New South Wales, Sydney, Australia)

Computational Biology and machine learning - A statistical method to identify functional genomic interactions

In this joint project with University of New South Wales, Sydney, Australia, we try to create a statistical method to identify functional genomic interactions. The most recently introduced group of these methods is Hi-C which uses high-throughput sequencing. This method quantify the interaction rate of the all interacting loci in the genome. These interactions show the proximity of two locus in the 3 dimensional space which may be far in the genomic sequence. This proximity can be an

evidence for a biological fact. The data generation process of the Hi-C technology is composed of complicated steps including fixation, digestion, ligation and amplification which leads to add many artifacts like noise and biases to the true signal. Advisors: Prof. Hamid R. Rabiee and Dr. Hamid Alinejad (University of New South Wales, Sydney, Australia).

Computational Biology and machine learning - Hi-C Background Model

In this joint project with University of New South Wales, Sydney, Australia, we try to present a background model for Hi-C data. Chromatin's 3D structure has been proved to play a crucial role in many biological processes such as gene regulation. Despite of the same DNA, different cell types have different 3D structures. Change in the 3D structure can also be one of the main drivers of the development of genetic diseases such as cancer. Therefore knowing the 3D structure, factors that control it and factors that can change it can improve current methods in the fields of Drug Design and Cell Reprogramming. Hi-C is a new technology that can capture the interactions between all pairs of chromatin locus at the same experiment. The amount of interaction recorded for each pair of locus is closely related to their proximity and contact frequency or in fact, their relative position in chromatin's 3D structure. Hi-C's output can be modeled as a complex network in which nodes are chromatin locus and the edge between any two loci is related to the amount of interaction between them. The network can further be analyzed from the complex networks point of view. Advisors: Prof. Hamid R. Rabiee and Dr. Hamid Alinejad (University of New South Wales, Sydney, Australia)

Computational Biology - Statistical Analysis of Clinical Data - Golestan Cohort

In this joint project with TUMS medical school, we try to analyze the data and design a statistical model to predict risk of cardiovascular diseases. Advisors: Prof. Hamid R. Rabiee and Dr. Mehrdad Mehrbod.

Blockchain (BS.project)

In this project we investigate the concept of blockchain and implement and personalize a distributed financial blockchain system. Advisor: Prof. Hamid R. Rabiee.

ACTIVITIES AND AWARDS

Member of National Organization for Development of Exceptional Talents (NODET) for Development of Exceptional Talents 2007-2014

Junior High school and High school

Third palace in basketball competition 2011

Basketball competition amongst Isfahan province high schools

being among the first 0.5% participants in Iran National Universities Entrance Exam 2014

Iran National Universities Entrance Exam in Physics and Mathematics

Technical staff 2014, 2016

Technical staff for ACM International Collegiate Programming Contest (ICPC) competition fall in Sharif university of technology

Top student athlete 2016

Top student athlete in basketball in Sharif university of technology

Technical staff 2017

Technical staff for IOI International Olympiad in informatics competition fall in Tehran, Iran

Research Assistant 2016-now

Research Assistant of BCB lab, Department of Computer Engineering, Sharif University of Technology

Candidate for master direct 2018

Candidate for master direct in Computer Engineering-Algorithms and calculations, Department of Computer Engineering, Sharif University of Technology

TEACHER ASSISTANT

Fundamental Of Programming(C) Fall 2015
Dr. khani, Sharif University of Technology
Numerical Method Fall 2017
Dr.gharib, Sharif University of Technology
Information Technology Project Management Spring 2017
Mr.abtahi, Sharif University of Technology
Computer network Spring 2018
Dr. Kharrazi, Sharif University of Technology
Computer Simulation Spring 2018
Dr. Farhadi, Sharif University of Technology

RESEARCH INTERESTS

Computational Biology
Machine learning
Deep learning

COMPLETED PROJECTS DURING MY BS

Manch Game Fall 2014
project of Fundamental Of Programming(C)
Write a program that play manch with extra feature with C

Flight control Game Spring 2014
project of Fundamental Of Programming(C)
Write a program that control airplane with extra feature with C and C++ and GTK

Monopoly Game Spring 2014
project of Advanced Programming(java)
Write a program that play monopoly with extra feature

Simulation Queue Spring 2015
project of Engineering Probability and Statistics
Simulation Queue with specific μ and capacity with matlab

random process Spring 2015
project of Engineering Probability and Statistics
Research about random process with matlab

Simulation Poisson distribution Spring 2015
Homework of Engineering Probability and Statistics
Design Poisson distribution with matlab

Simulation cache memory of computer Spring 2015
project of Architecture of computer
Design a cache memory of computer with Quartus

Simulation of computer Spring 2015
project of Architecture of computer

Design a computer with Quartus

Travel agency System Fall 2016

project of Data Base

An application with Data Base that provide you any thing you need in travel

Manipulation of kernel of Linux Fall 2016

project of Operation System

Add system call in kernel of Linux

File System Fall 2016

project of Operation System

Create a user-level library, libFS, which handles an adequate portion of a file system. We incorporate your file system into a library that applications can link with to access files and directories. our library will in turn hooks with LibDisk, a library that just mocks behaviors of a "disk". A reference to LibDisk's source is given to you in this spec.

Rahnama System Spring 2016

project of Systems Analysis and Design

Develop the System that help student to do work of university

Coursware System Fall 2017

project of Software Engineering

Develop the System that manage the lesson from different university like `https://piazza.com/`

Block chain Spring 2017

project of Data and network security

Develop the application that simulate block chain with secure data base in java language

SKILLS

Languages	Persian (Native language) English (Advance)
Software	MATLAB, CLION, POSTSGRE, INTELLIJ, SPICE, QUARTUS,PYCHARM, DATAGRIP, MODELSIM
Programming Languages	C, C++, JAVA, PYTHON, MATLAB, R, SQL, HTML, CSS, DJANGO, PHP, BASIC, VERILOG, PSPICE
Operating Systems	Linux, Windows
Typesetting	LaTeX, Microsoft Office

TEST SCORE

TOEFL
GRE
General

REFERENCES

Hamid R. Rabiee
Professor of Computer Engineering (+98) 912-340-7011
Director, AICT Research Center rabiee@sharif.edu
Director, DML & VASL Research Labs
Computer Engineering Department
Sharif University of Technology, Tehran, Iran

Hamid Alinejad-Rokny
Research Associate of UWA Center for Medical Research (+61) 450-166-114
Health and Medical Sciences Department hamid.alinejad@uwa.edu.au
The University of Western Australia, Perth, Australia

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