

# Mahsa Mohammadi

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## Education

### University of Nebraska-Lincoln

PhD student in biological systems engineering

- CBIO program, Systems analysis

Lincoln, US

Aug 2022 - Current

### University of Tehran

Bachelor of biotechnology

- Graduated with GPA 16.73/20

Tehran, Iran

Sep 2017 - July 2021

### University of Tehran

Minor of entrepreneurship

- Graduated with GPA 19.09/20

Tehran, Iran

Sep 2019 - July 2021

## Projects and research experiences

### Gut microbiome data-driven modeling

University of Nebraska-Lincoln

- Network inference analysis of the gut microbiome of individuals treated with antibiotics.
- Network inference analysis of the gut microbiome cultured with different types of carbohydrate.
- **Technical Skills:** Python and R programming, Network inference, microbiome modeling using SPIEC-EASI and LIMITS.
- **Soft Skills:** Presentation skills, Communication, Teamwork.

Lincoln, US

Aug 2022 - current

### In vivo gene assembly of yeast

Pioneers of engineering biology (Dena)

- **Technical Skills:** DNA, RNA and plasmid extraction, Electrophoresis, Primer design, Electroporation, PCR, Cloning, Digestion, Gene assembly.
- **Soft Skills:** Creative thinking, time management.

Tehran, Iran

July 2021 - March 2022

### Extraction of probiotic bacteria from local birds of Golestan province, Iran

University of Tehran

- Bachelor project under the supervision of Dr. Javad Hamed.
- **Technical Skills:** Sample collection, Culture media preparation, Bacteriological culture methods, Gram staining, Pour plate method, Enzymes tests, MIC, Antimicrobial test, 0.5 McFarland standard preparation, Serial dilution, Spectrophotometry, Biochemical tests, microscopy, PH test, Bile test.
- **Soft Skills:** Patience.

Tehran, Iran

Feb 2021 - May 2021

### Herbicide-tolerant genetically modified (GM) crops

University of Tehran

- Project of the food biotechnology course.

Tehran, Iran

Nov 2020 - Dec 2020

## Presentations and Publications

### CONFERENCE PRESENTATION

Constructing a network graph of correlations between microbial taxa and fecal metabolites in the gut of captive marmosets (*Callithrix jacchus*) (In preparation)

Jordan B Hernandez, Shivdeep S Hayer, Sophie Alvarez, Anne Fischer, Haley R Hassenstab, effery A French, Katherine Cooper, Zahraa W Alsafwani, Andrew K Benson, Mallory J Suhr Van Haute, Jacques Izard, Mahsa Mohammadi, Hyun-Seob Song, Jonathan B Clayton

*International Primatological Society (IPS) Conference* (Aug. 2023). 2023

## Interests

Computational biology - Systems biology - Data-driven modeling - Network inference - Gut microbiome modeling

## Skills

<b>Computer skills</b>	Python, R, Gene runner, SnapGene.
<b>Laboratory skills</b>	Bacteriological culture methods, Gram staining, Pour plate method, Enzymes tests, MIC, Antimicrobial test, Spectrophotometry, Biochemical tests, DNA, RNA and plasmid extraction, electrophoresis, microscopy, PH test, Bile test, Primer design, Electroporation, PCR, Cloning, Digestion, Gene assembly, Cell culture, MTT analysis, SDS page, Bradford test, FPLC .
<b>Soft Skills</b>	Time Management, Teamwork, Problem-solving, Documentation, creative thinking, flexibility, leadership.

## Work Experience

### PersisGen accelerator

Research and Development Specialist

Tehran, Iran

Oct 2021 - Apr 2022

- Part-time job in purification department.
- **Technical Skills:** FPLC and other methods for protein purification.
- **Soft Skills:** Teamwork, Communication.

### PersisGen accelerator

Volunteer executive staff

Tehran, Iran

Oct 2021

- Executive staff of PersisGen accelerator in 6th International exhibition on pharmaceuticals and related industries

### PersisGen accelerator

Volunteer executive staff

Tehran, Iran

Jan 2022

- Executive staff of PersisGen accelerator in 2nd International congress on biotech products and related industries

### Ordibehesht high school

Biology teacher

Azadshar, Iran

Sep 2020 - Mar 2021

- Part-time teacher for biology olympiad.

### Biotechnetwork

Content production manager

Tehran, Iran

Sep 2020 - Sep 2021

- <https://www.instagram.com/biotechnetwork>
- **Technical Skills:** Editing.
- **Soft Skills:** Teamwork, Communication, leadership, planning.

### University of Tehran

Member of student biology association

Tehran, Iran

Jul 2020 - Dec 2021

- I was the admin of social media and held more than 20 Instagram live with successful Iranian biologists in and out of Iran.

## Awards and honors

2021	<b>1st rank</b> , 4th Young scientists' festival	Iran
2020	<b>4th rank</b> , First national Covid-19 hackathon	Iran
2019	<b>6th rank</b> , Iran's National Elite Foundation's first competition	Iran
2018	<b>9th rank</b> , 2nd Young scientists' festival	Iran

## Languages

**English** TOEFL IBT score: 93

**Persian** Native proficiency