

Amirhossein Mahmoudi

 [mamood.ir](https://github.com/mamood.ir)  [ammahmoudi](https://github.com/ammahmoudi)  [am-mahmoudi](https://www.linkedin.com/in/am-mahmoudi)  am.mahmoudi@outlook.com  +989039232023

EDUCATION

Sharif University of Technology
Bachelor of Science in Computer Science
Selected Courses:

Sep. 2019 - Present
Current GPA: 3.5/4.0

- Machine Learning (*Classical Models, Deep Neural Networks, Convolutional Neural Networks, Sequence Processing Models*)
- Statistical Learning (*Classical Machine Learning, Mathematical Foundations of Machine Learning*)
- Introduction to Bioinformatics (*Gene Expression, De Novo Assembly, Phylogenetic trees, Epigenetics, Markov Models*)
- Big Data Engineering (*MapReduce, Spark, Hadoop, Kafka, Cassandra, Docker*)
- Numerical Analysis 2 (*Linear and Nonlinear Systems, Iterative Techniques, Initial-Value and Boundary-Value Problems*)
- Advanced Programming (*Object Orientation, Generic, Graphic, Concurrency, Reflection, Network*)
- Probability and Its Applications
- Data Structures
- Design Algorithms
- Linear Algebra

RESEARCH INTEREST

- Machine Learning
- Deep Learning
- Computational Biology
- Computer-Aided Medical Procedures

RESEARCH EXPERIENCE AND PROJECTS

Transcriptome-Based Fluxomics Reconstruction with a Novel Deep Learning Approach

Currently in progress as bachelor project

Supervisor: Dr. Mojtaba Tefagh

- Applying implicit deep learning and convex optimization layers to infer metabolic fluxes from gene expression data

Chaka: A High-performance, Cost-efficient, Semi-conventional Regional Jet Family

2nd place in the 2021 AIAA graduate team aircraft design competition

Supervisor: Dr. Mohammad H Sadraey

- Designing a modern regional jet family with a 20% reduction in fuel consumption compared to existing rivals

MIS-PADX: Manned Intelligent Scientific Phobos and Deimos Exploration

Participation in the 2022 AIAA undergraduate team space design competition

Supervisor: Dr. Maryam Kiani

- Developed a conceptual design for a Martian Moon Exploration Excursion Vehicle to collect lunar samples

WE ([Github](#))

The final project for advanced programming course

Supervisor: Mojtaba Ostovari

- Developed a Java-based social app with JavaFX and Hibernate ORM, featuring messaging and posting

Breast Cancer Prediction ([Github](#))

Homework for Machine Learning Course

Supervisor: Dr. Ali Sharifi Zarchi

- Applying machine learning models to estimate survival outcomes of breast cancer patients

TEACHING EXPERIENCE

Machine Learning | *Teaching Assistant and Co-Instructor*
Lecturing and designing homework ([Github](#))

Jan. 2023 - Aug. 2023
Supervisor: Dr. Mahdi Sharifzadeh

Advanced Programming with Java | *Teaching Assistant*
Designing course project ([Github](#))

Jan. 2023 - Aug. 2023
Supervisor: Dr. Hossein Boomari

Basics for Programming with C | *Teaching Assistant*
Designing course homework

Jan. 2021 - Aug. 2021
Supervisor: Dr. Marjan Nikbin

WORK EXPERIENCE

<u>Gamein</u> <i>Graphic Design Manager</i> Biggest student event in Iran around supply chain simulation	May 2022 - Apr. 2023
<u>Winter Seminar Series</u> <i>Graphic Designer</i> Annual events including seminars about advanced topics of computer science with the presence of prominent professors	Feb. 2023 - Mar. 2023
<u>Sharif Visual Arts Club</u> <i>Advertising Manager, Website Manager</i> Cool university club centered around visual arts	Oct. 2020 - Present
<u>Sharif Poetry and Literature Club</u> <i>Member</i> University club to share and develop Persian poetry skills	Sep. 2019 - Present
<u>Hamband Scientific Society</u> <i>Graphic Designer</i> Scientific Society of Math Department at Sharif University of Technology	Aug. 2022 - Present
<u>Owj Magazine</u> <i>Graphic Designer</i> Scientific magazine of Student Society of Aerospace Engineering Department at Sharif University of Technology	Jan. 2019 - Jan. 2022

SKILLS

Programming Languages: C, Java, Python, R, Scala, HTML/CSS,
Tools: Git/GitHub, Docker, Unix Shell, SQL, Spark, MongoDB
Frameworks: React, WordPress, Spring, Hibernate ORM
Libraries: TensorFlow, PyTorch, Scikit-Learn, Keras, Pandas
Soft Skills: Scrum, Agile Project Management, Team Leadership, Project Planning, Presentation

PUBLICATIONS

- Mohammad H. Sadraey, **Amirhossein Mahmoudi**, et al., “Chaka: A high-performance, cost-efficient, semi-conventional regional jet family”, American Institute of Aeronautics and Astronautics (AIAA), Reston, Virginia, USA, 15th September 2021. ([DOI: 10.13140/RG.2.2.20347.64802](https://doi.org/10.13140/RG.2.2.20347.64802))

HONORS AND AWARDS

2nd Place in The 2021 AIAA Graduate Team Aircraft Design Competition Among teams from top-ranked universities • Announcement , Winning Proposals , Certificates	2020 - 2021 Organized by the American Institute of Aeronautics and Astronautics
Participation in The 2022 AIAA Undergraduate Team Space Design Competition Competing with elite teams from top-ranked universities • Certificates	2021 - 2022 Organized by the American Institute of Aeronautics and Astronautics

LANGUAGES

Persian: Native/Bilingual
Kurmanji (Northern Kurdish): Native/Bilingual
English: Professional working proficiency

HOBBIES AND INTERESTS

- Writing poem in Persian
- Drawing portrait
- Coordinating English free discussion sessions at the local language institute
- Amatur volleyball player (Member of the volleyball team in the Math Department)

❗ **References, Further information, and Proofs are available upon Request.**