S. Amir Tabatabaei H.

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EDUCATION

2022 – Current
Istanbul, Turkey

Ph.D. in Biomedical Engineering

Koç University (KU)

- ***GPA:*** *3.88 / 4*
- ***Thesis Project:*** *Designing a centralized registry for transplantation data.*
- ***Supervisor:*** *Dr. Caner Süsal*

2019 – 2021
Tabriz, Iran

M.Sc. in Biomedical Engineering (Bioelectric)

Tabriz University of Medical Science (TBZMED)

- ***GPA:*** *3.9 / 4 (Ranked 1st)*
- ***Thesis Topic:*** *Building an AI predictive model for predicting bio-impedance analysis derived phase angle determinants using adults' body composition indexes.*
- ***Supervisors:*** *Dr. Mahdad Esmaeili and Dr. Fariborz Rahimi*

2016 – 2018
Tabriz, Iran

B.Sc. in Biomedical Engineering (Bioelectric)

Islamic Azad University of Tabriz (IAUT)

- ***GPA:*** *3.5 / 4 (Ranked 3rd)*
- ***Thesis Topic:*** *Designing a smart anti-kyphosis brace with the ability to prevent waist and neck curvature.*
  - ❖ *Patented at the Iran Document Registration Organization*
    Ref. No. 85351
- ***Supervisor:*** *Dr. Siamak Haghipour*

PhD COURSES

- *Medical Image Analysis:* ***A-***
- *Biostatistics:* ***A+***
- *Fundamentals of Biological Data Analysis:* ***A-***
- *Artificial Intelligence for Medical Diagnosis:* ***A***
- *Basic Sleep Medicine:* ***A***

INTERESTS

- *Data Science*
- *Artificial Intelligence*
- *Medical Image Processing*

PUBLICATIONS

Journal

- **S. A. Tabatabaei H.**, F. Rahimi, M. Esmaeili, M. Khalili

"Phase Angle Determinants in Patients with Cardiovascular Disease Using Machine Learning Methods."

Journal of Health and Technology, (2021), *(Full Paper Here)*

Journal

- **S. A. Tabatabaei H.**, M. Esmaeili, F. Rahimi, M. Khalili, F. Pourteymour F. T.

"Phase Angle Determinants in Adults Based on Body Composition – A Machine Learning Approach"

*Journal of Biomedical Signal Processing and Control, (2021) (**Under Review**)*

Journal

- S. Sarabi, M. Asadnejad, **S. A. Tabatabaei H.**, S. Rajebi

"Using Artificial Intelligence for Detection of Lymphatic Disease and Investigation on Various Methods of Its Classifications."

International Journal on "Technical and Physical Problems of Engineering", (2020), 12(43), 58-65. (Full Paper Here)

Conference

- **S. A. Tabatabaei H.,** M. Esmaeili, Y. Donyatalab, F. Rahimi

"The Most Effective Factors in Predicting Bioelectrical Impedance Phase Angle for Classification of Healthy and Depressed Obese Women: An Artificial Intelligence Approach."

Intelligent and Fuzzy Techniques for Emerging Conditions and Digital Transformation. INFUS 2021, vol. 308. Springer, *(Abstract Here)*

Conference

- D. Moradi, R. Eyvazpour, **S. A. Tabatabaei H.,** Y. Donyatalab, F. Rahimi

"Fuzzy Cluster Analysis of Claustrophobia Questionnaire Data in Iranian Male and Female Educated Populations."

Intelligent and Fuzzy Techniques for Emerging Conditions and Digital Transformation. INFUS 2021, vol. 307. Springer, *(Abstract Here)*

Conference

- H. Abdollahzadeh, **S. A. Tabatabaei H.**, M. Mishra

"Physician Assisting Robot by Image and Speech Processing."

Presented at the 8th Symposium on Advances in Science & Technology, Ferdowsi University, Mashhad, Iran (2013)

AWARDS & GRANTS

February 2022
Istanbul, Turkey

Research grant for Ph.D. research (Principal Investigator: Dr. C. Süsal)

- *Funding granted from Koç University Transplant Immunology Research Center of Excellence (TIREX)*

June 2019
Tabriz, Iran

Research grant for M.Sc. thesis (Principal Investigator: Dr. M. Esmaeili)

- *Funding granted from Tabriz University of Medical Science research center sources*

May 2018
Tehran, Iran

Awarded Iranian government scholarship for graduate studies.

- *Due to my 32nd place in the nationwide Iranian university entrance exam among approximately 9000 students.*

July 2016
Tehran, Iran

Ranked 1st in the Islamic Azad university entrance exam in Biomedical Engineering field.

- *About 20000 students participated in the exam that year.*

June 2015
Pittsburg, USA

Gold medal at International Exhibition of Inventions in United States (INPEX)

- *H. Abdollahzadeh, **S.A. Tabatabaei H.**, R. Fathzadeh, M. Gholipour*
  ***Project:** The physician assisting robot.*

October 2013
Warsaw, Poland

Gold medal at the 7th International Exhibition of Inventions in Poland (IWIS)

- ***S.A. Tabatabaei H.,** H. Abdollahzadeh, M. Soleymani , S. Ghadimi, S. Namazipour*
  ***Project:** Composite wheelchair for the physically disabled people with the ability to go up and down the stairs and becoming in the bed style.*

April 2013

Gold medal at the 41st International Exhibition of Inventions in Switzerland (IEIG)

Geneva, Switzerland

- *H. Abdollahzadeh, **S.A. Tabatabaei H.**, S. Salimi, F. Jalilzadeh*
  ***Project:** The leafing Robot for physically handicapped people using brain signal processing.*

PATENTS

March 2015 ***Smart Anti-Kyphosis Brace with the Ability to Prevent Waist and Neck Curvature.***

- *Iran Document Registration Organization, Ref. No. 85351*
- *Funded by Azad University of Tabriz*

November 2014 ***Osteoporosis and Kyphosis prevention tools.***

- *Iran Document Registration Organization, Ref. No. 84232*
- *Funded by Sahand University of Technology*

SKILLS

Professional	Proficient:	Python, Matlab
	Intermediate:	AVR Programming
	Basic:	R, SQL
	Libraries:	Tensorflow, Django, Keras, OpenCV, Scikit-Learn, Numpy, Pandas
Software	Tools:	Proteus, Pspice, SPSS, Excel, Github
	Platforms:	Linux, Windows
Language	Native:	Azerbaijani, Persian
	Advanced:	English, Turkish

INVOLVED PROJECTS

2023 – Current AI-based segmentation of pathological features such as glomerular and tubulointerstitial changes, inflammatory cell infiltration, and fibrosis in kidney biopsy samples, **Koç University Pathology Lab**, Koç University, Istanbul, Turkey.

2023 – Current An investigation into data harmonization tools for organ transplantation, **Transplant Immunology Research Center of Excellence Lab (TIREX)**, Koç University, Istanbul, Turkey.

2022 – Current Creating a centralized registry for transplantation data, **Transplant Immunology Research Center of Excellence Lab (TIREX)**, Koç University, Istanbul, Turkey.

2019 – 2021 Building an AI predictive model to predict the Bio-Impedance Analysis (BIA) phase angle value and extracting the most important determinants of it using adults' body composition data, **Nutrition Assessment Lab (NALab)**, Tabriz University of Medical Science, Tabriz, Iran.

2020 – 2021 Classification of Phonocardiogram (PCG) and Electrocardiogram (ECG) signals using deep learning, signal processing, and optimization algorithms, **Biomedical Engineering Lab (BIOLab)**, Tabriz University of Medical Science, Tabriz, Iran.

2020 - 2021 Urinary sediment image classification and segmentation along with image synthesis using Generative Adversarial Networks (GANs), **Danesh Pathobiology Laboratory (DPLab)**, Tabriz, Iran.

2020 Analyzing body composition data for classifying healthy and depressed obese women using machine learning methods, **Nutrition Research Lab (NRLab)**, Tabriz University of Medical Science, Tabriz, Iran.

2020 Cluster analysis of claustrophobic patients using hard clustering and fuzzy clustering methods in machine learning, **Brain and Cognitive Neuroscience Laboratory (BCNL)**, Tabriz University, Tabriz, Iran.

2019 Classification of benign and malignant lymph for detection of lymphatic disease from lymphographic images, **Image and Video Processing Lab (IVPL)**, Seraj University, Tabriz, Iran.

REFERENCES

- ***Available upon request.***