

Soroush Dianaty, M.D.

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Physician-scientist and PhD researcher in Biomedical Informatics at Arizona State University, specializing in evaluation frameworks for trustworthy clinical LLMs. Research focuses on translating academic findings into clinically deployable AI systems, with emphasis on hallucination detection, evidence grounding, and responsible AI evaluation. Brings frontline clinical experience and ML research training to bridge the gap between what health AI can do and what clinicians and patients can safely trust.

Education

Ph.D. in Biomedical Informatics and Data Science | Aug 2025 – Present

Arizona State University (ASU), Tempe, AZ

Doctor of Medicine | Sep 2016 - Jun 2024

Tehran Medical Branch of Azad University (IAUTMU), Tehran, Iran

Thesis: Cost-effectiveness of plasmapheresis vs hemoperfusion in critically ill COVID-19 patients

Skills

- **Machine Learning & AI:** Deep Learning, Classical ML, LLM Fine-Tuning (LoRA, PEFT), Prompt & context engineering, LLM application development, AI-assisted prototyping
 - **Programming & Data:** Python, SAS, SQL, Linux, Git
 - **Health Data & Interoperability:** FHIR, Clinical terminologies (SNOMED-CT, LOINC, ICD), EHR systems (Epic)
 - **Research Methods:** Regression modeling, Survival analysis, Cost-effectiveness analysis
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Publications

Peer-reviewed Articles

1. Lee P, Dhadwal AS, Kaiser M, **Dianaty S**, Lott E, Singh G, et al. Assessing the Effectiveness and Scalability of FHIR-Based Granular Data Segmentation Technology. *Appl Clin Inform.* 2026. Accepted.
2. **Dianaty S**, Gholami F, Gholamrezaie HR, Mirzaei A. Cost-effectiveness of plasmapheresis and hemoperfusion in COVID-19 survivors: A six-month follow-up analysis after hospital discharge. *Ther Apher Dial.* 2025 Jan 14. Epub ahead of print.

3. Raiszadeh M, Khosronejad A, **Dianaty S**, Ghorbani Yekta B. Novel repair of acute Stanford type B aortic dissection using combined endovascular graft and transfemoral replacement of vascular plug. *Catheter Cardiovasc Interv*. 2023 Dec;102(7):1287-1290.
4. **Dianaty S**, Khodadadi S, Alimoghaddam R, Mirzaei A. Comparison of outcomes and costs of extracorporeal blood purification therapies in critically ill COVID-19 patients. *Ther Apher Dial*. 2023 Jun;27(3):505-516.
5. Some Saraii ZK, **Dianaty S**, Rouhollah F, Zare N, Ghorbani Yekta B. Reproductive status of male rat offspring following exposure to methamphetamine during intrauterine life: An experimental study. *Int J Reprod Biomed*. 2023 Mar;21(2):175-184.
6. Darabi R, Ghoreishi B, **Dianaty S**, Motevalli MS. Stress and menstrual disorders among Iranian medical students: A cross-sectional study. *South East Asia J Med Sci*. 2021 Sep;5(2):8-15.
7. Yaminifar L, **Dianaty S**, Shahverdi Z, Yaraghi M, Ghorbani Yekta B. Differential diagnosis of benign ovarian cysts using tumor markers in serum and cyst fluid. *South East Asia J Med Sci*. 2021 Sep;5(2):1–7.

Conference Abstracts / Proceedings

1. **Dianaty S**, Soumma SB. Explainable early prediction of acute kidney injury using first 24-hour physiologic and clinical data. *2nd Arizona Digital Health Symposium*; 2026 May 5; Phoenix (AZ). Accepted, Conference Forthcoming.
2. **Dianaty S**, Kaiser M, Murcko A, Grando A. Early Evidence for Context-Aware Large Language Models (LLMs) in Sensitive Health Data Classification. In: *Academy Health Annual Research Meeting 2026*; 2026 May 30–Jun 2; Seattle, WA. Accepted, Conference Forthcoming.
3. **Dianaty S**, Ghorbani Yekta B. Effects of *Descurainia Sophia* products on urinary and renal function. In: *Congress of Invention, Patenting and Manufacturing of Experimental, Pharmaceutical and Clinical Products*. IAUTMU; 2018 Feb 25; Tehran, Iran.

Book Chapters

- *Practical Guide to Psychiatric Medications*, 2nd ed. (MTP Psychiatry, 2022): “Introduction to Digital Psychiatry,” “The COVID-19 Pandemic and Mental Health,” “Apps and Wearables for Mental Health,” and “Future Advances in Mental Health.”

Research Experience

Substance Use Health Record Sharing (SHARES) | Oct 2024 – Present

ASU, Tempe, AZ | Funded by NIDA | PI: Dr. Adela Grando

- Developed and validated EHR segmentation rules to support automated substance-use-disorder record sharing.
- Applied clinical domain knowledge to improve the accuracy and interpretability of structured health data.

Development and Evaluation of an Online Decision Aid | Nov 2024 – Present

ASU, Tempe, AZ | Funded by AHRQ | PI: Dr. Dongwen Wang

- Developed patient-facing educational content and backend scoring logic for an online contraception decision aid tailored to transgender and gender-nonconforming users assigned female at birth.

Computational Medicine Center | Aug 2023 - May 2024

K. N. Toosi University of Technology, Tehran, Iran

- Led interdisciplinary development of neural networks for cardiovascular disease detection from PPG
- Built Python pipelines for data acquisition and preprocessing, and analysis of EHR-linked biosignal data

Universal Scientific Education and Research Network (USERN) | Mar 2022 - Mar 2023

Tehran University of Medical Sciences, Tehran, Iran

- Coordinated logistics and research-related content development for USERN events.
- Automated certificate generation with Python, reducing processing time by 60%.

Neuroscience Research Center | May 2018 - Jan 2020

Department of Physiology, IAUTMU, Tehran, Iran

- Conducted data analysis and visualization in support of neuropharmacology research
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Teaching Experience

Teaching Associate | Aug 2025 – Present

College of Health Solutions, Arizona State University

- Supported instruction for BMI 201 (Introduction to Clinical Informatics) and BMI 601 (Health Informatics) through assignment development, discussion facilitation, grading, and student guidance.

Online Instructor | Sep 2023

- Designed and delivered a 6-hour workshop for 50+ attendees on the use of AI tools in academic writing
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Clinical Experience

Family Physician | Oct 2024 - Jul 2025

Qeshlaq Rural Health Center, Abyek, Qazvin, Iran

- Delivered primary and preventive care for a rural population of 7,500+ across 17 villages and 5 satellite health centers.
- Managed chronic disease, prenatal, adolescent, and mental health care within Iran's national EHR system.
- Coordinated care with multidisciplinary teams across distributed rural service sites.

Clinical Rotations | Oct 2020 - May 2024

IAUTMU Hospital Network

- Completed 7,000+ hours of clinical rotations across 6 hospitals and 16 specialties.
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Awards and Honors

- First Place (\$2,500) | Nucleate Arizona BioChallenge | Oct 2025
 - Graduate Fellowship (\$4,845) | Graduate College, ASU | 2025-2026
 - Active Member Award | Student Research Committee, IAUTMU | Oct 2018
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Licenses and Certifications

- **Medical License**
Medical Council of Iran (IRIMC) | Sep 2024
 - **IRB - Biomedical Research**
CITI Program Course | Feb 2026
 - **Human Subjects Research**
CITI Program Course | Sep 2023
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Professional Activities

Peer Review

- Frontiers in Pharmacology - 1 manuscript reviewed
- Italian Journal of Gynaecology & Obstetrics - 2 manuscripts reviewed

Memberships

- American Medical Informatics Association (AMIA) | Dec 2025 – Present
- ASU CHS Council of Inclusive Excellence (CIE) | Oct 2025 – Present
- USERN Executive Committee | Mar 2022 - Mar 2023
- IAUTMU Student Research Committee | Feb 2018 - Jun 2024