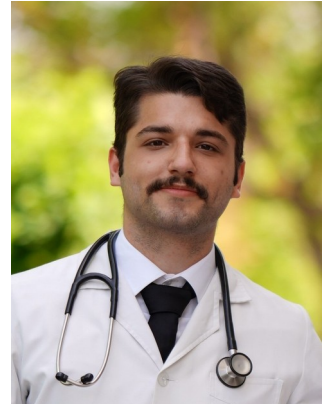


# DANIAL ELYASSIRAD, MD

Physician-Researcher • [Google Scholar](#) • [LinkedIn](#) • [Portfolio / CV](#)

Dr. Danial Elyassirad is a physician and medical AI researcher specializing in uncertainty quantification for medical imaging AI. His work adds a critical capability to deep learning models: the ability not just to predict, but to recognize and communicate when a prediction is not confident enough, attaching calibrated uncertainty estimates to the model's final outputs. This makes AI systems more trustworthy and equitable, a requirement that is especially critical in medicine, where a confident but wrong prediction can carry real clinical consequences. His application of these uncertainty quantification methods to brain tumor segmentation and radiology report generation has been recognized with two international awards.



## Education

- **National Organization for Development of Exceptional Talents (NODET/Sampad)**, Iran's selective national program for gifted students (entry via competitive nationwide exam) (2013–2019)
- **Mashhad University of Medical Sciences**, Mashhad, Iran, *Doctor of Medicine (MD)* (2019–2026)

## Honors and Awards

- **Winner of the SIIM Helen and Paul Chang Foundation New Investigator award (US)** for [CONRep: Uncertainty-Aware Vision-Language Report Drafting Using Conformal Prediction](#) and **winning \$1,250 prize** (2026)
- **Winner of the John L. Ulmer Award at ASFNR (US, CA)** for [CONSeg: Voxelwise Uncertainty Quantification for Glioma Segmentation Using Conformal Prediction](#) and **winning \$1,000 prize** (2025)
- **Rank 3** among presented abstract in Sharif AIH congress and **winning \$500 prize** (2025)
- **Rank 1** among the best student ideas in the final round of the "Artificial Intelligence in Medical Sciences Idea Challenge" and **winning \$400 prize** (2024)
- **Rank 1** among student presentation at the Annual Congress of the Iranian Medical Council (2024)
- **Patent Certificate** for Mother and Fetus Health Monitoring (2023)
- Member of the **University's Talented Students Program** (2019–2026)
- **National Elites Foundation of Iran**, enrolled 2018 (national body for identifying and supporting exceptional talent)
- **Silver Medalist**, National Student Biology Olympiad (2018)

## Research Experience

- Led or co-led **10+ published research projects** in **AI for medical imaging** since 2024
- **First-authored 3 peer-reviewed publications** in **uncertainty-aware AI models in medical imaging**: [IDH Conformal Prediction](#) and [CONRep](#) in the Journal of Imaging Informatics in Medicine (Q1) and [CONSeg](#) in the American Journal of Neuroradiology (Q1)
- Serve as a **peer reviewer** for [npj Precision Oncology](#) (Q1), [Scientific Reports](#) (Q1), [BMC Medical Imaging](#) (Q1), [Frontiers in Medicine](#) (Q1) and [Discover Oncology](#) (Q2)
- **Developed an interactive tutorial** on [uncertainty quantification in medical imaging](#)
- Co-founded and lead [NeuroAIHub](#), an open-source **AI-driven registry for neuroradiology dataset discovery** ([GitHub](#), [Demo](#), [web app](#), published in the American Journal of Neuroradiology)

## Grants

- **Principal Investigator**, "The Comparison of the Efficacy of Two Assistant Tools, ChatGPT-4 and UpToDate, in the Management of Complicated Cases" peer-reviewed and approved by the Mashhad University of Medical Sciences (MUMS) Research Council, **funded by the Vice Chancellery for Research** (2024)

## Teaching & Leadership Experience

- **Assembled a research team** in 2025 and continue to lead it; **the team has published 10+ Q1–Q2 studies** in 2025-2026
- **Mentored 2 medical students in AI applications for medical imaging** research; both have since published studies in top-tier journals (2025-2026)
- **Mentored a medical intern** on a MUMS-funded research grant project "The Comparison of the Efficacy of Two Assistant Tools, ChatGPT-4 and UpToDate, in the Management of Complicated Cases"; **her contribution became the basis of her MD thesis** (2025-2026)
- **Conducted a series of AI Fundamentals workshops for medical sciences students** (2025)
- **Lecturer and Mentor, Biology Olympiad Preparation Program (2019–2023)**
  - o Delivered 100+ lectures on mathematical and informatics-based problem solving in biology to over 500 high school students across Iran
  - o Provided comprehensive mentoring and support to 5 students preparing for the Biology Olympiad

## Publications

1. **Elyassirad D**, et al. CONRep: uncertainty-aware vision-language report drafting using conformal prediction. J Imaging Inform Med. 2026.
2. **Elyassirad D**, et al. Predicting IDH mutation in glioma patients using deep learning algorithms with conformal prediction. J Imaging Inform Med. 2026.
3. Gheiji B, **Elyassirad D**, et al. CONReg: uncertainty-aware medical image registration using conformal prediction. J Imaging Inform Med. 2026.
4. Gheiji B, **Elyassirad D**, et al. UQMIA: An Open, Hands-On Tutorial on Uncertainty Quantification in Medical Imaging Analysis with Large Language Model-Based Assessment of Educational Content. arXiv. 2026.
5. **Elyassirad D**, et al. CONSeg: voxelwise uncertainty quantification for glioma segmentation using conformal prediction. AJNR Am J Neuroradiol. 2025.
6. **Elyassirad D**, et al. Comparative analysis of 2D and 3D ResNet architectures for IDH and MGMT mutation detection in glioma patients. arXiv. 2024.
7. Hasanpour M, **Elyassirad D**, et al. Predicting epidural hematoma expansion in traumatic brain injury: a machine learning approach. Neuroradiol J. 2025.
8. Rostami A, **Elyassirad D**, et al. Functional outcome and mortality predictors in patients with cerebral ischemic infarction after decompressive craniectomy: cross-sectional study. World Neurosurg. 2024.
9. Ahmadzadeh AM, Jafarnejhad A, **Elyassirad D**, et al. Improving radiomics-based isocitrate dehydrogenase 1 prediction in glioma patients using semi-supervised machine learning models. BMC Med Imaging. 2025.
10. Kamandi N, Mohammadzadeh S, Mirzai M, Ghasemi M, **Elyassirad D**, et al. Artificial Intelligence for Rupture Risk Stratification of Small Unruptured Intracranial Aneurysms ( $\leq 7$  mm): A Systematic Review and Meta-Analysis. J Imaging Inform Med. 2026.
11. Gheiji B, Moradi S, Vatanparast M, Shokrani S, Bagherzadeh MA, **Elyassirad D**, et al. NeuroAIHub: an AI-driven framework for automated curation and discovery of neuroradiology datasets. AJNR Am J Neuroradiol. 2026.
12. Ahmadzadeh AM, Ashoobi MA, Lomer NB, Vatanparast M, Gheiji B, **Elyassirad D**, Faghani S. Radiomics and deep learning models for predicting glioma p53 status: a diagnostic accuracy systematic review and meta-analysis. Clin Imaging. 2026.
13. Ahmadzadeh AM, Lomer NB, Ashoobi MA, **Elyassirad D**, et al. Predicting 1p/19q codeletion status in glioma using MRI-derived radiomics: a systematic review and meta-analysis of diagnostic accuracy. AJNR Am J Neuroradiol. 2025.

14. Ahmadzadeh AM, Broomand Lomer N, Ashoobi MA, **Elyassirad D**, et al. MRI-derived deep learning models for predicting 1p/19q codeletion status in glioma patients: a systematic review and meta-analysis of diagnostic test accuracy studies. *Neuroradiology*. 2025.
15. Ahmadzadeh AM, Ashoobi MA, Broomand Lomer N, **Elyassirad D**, et al. Application of deep learning for predicting hematoma expansion in intracerebral hemorrhage using computed tomography scans: a systematic review and meta-analysis. *Radiol Med*. 2025.
16. Ghorbani M, Keykhosravi E, Vatanparast M, **Elyassirad D**, et al. Flow diverting stent monotherapy as the best choice in the treatment of intracranial blood blister-like aneurysms: a systematic review. *Neurosurg Rev*. 2024.
17. Ghorbani M, Keykhosravi E, Vatanparast M, **Elyassirad D**, et al. Traumatic middle meningeal artery aneurysm: a case report. *Neurochirurgie*. 2024.
18. Hasanpour M, Golchin N, Mirsardoo H, Alagha A, **Elyassirad D**, et al. Pseudoaneurysm formation after placement of a FRED flow diverter stent in a patient with iatrogenic ICA injury during transsphenoidal surgery: a case report. *Neurochirurgie*. 2024.
19. Dashti S, Bolghanabadi N, Ghavami V, **Elyassirad D**, et al. The impact of COVID-19 on female sexual function: a systematic review and meta-analysis. *J Sex Marital Ther*. 2022.

## Congress

- **SIIM 2026**, Oral presentation, Winner of the Helen and Paul Chang Foundation New Investigator Award, *CONRep: Improving Reliability of Vision-Language Report Generation via Conformal Prediction*
- **SIIM 2026**, Poster presentation, *Uncertainty Quantification for Vision-Language Model Classification in Medical Imaging*
- **RSNA 2025**, Oral presentation, *NEUROAIHUB: An AI-Driven Framework for Automated Discovery and Retrieval of Neuroradiology Datasets*
- **ASFNR 2025**, Oral presentation, Winner of John L. Ulmer Award, *CONSeg: Voxelwise Uncertainty Quantification for Glioma Segmentation Using Conformal Prediction*
- **AIH Congress 2024**, Oral presentation, *Improving IDH Mutation Prediction using Conformal Prediction*
- **CARDIOHTMEDIC 2024**, Oral presentation, *Interpretable Deep Learning model for uncertainty-based left ventricle ejection fraction estimation in echocardiography*
- **ASFNR 2024**, Poster presentation, *Machine Learning and Deep Learning Performance in Prediction IDH Mutation, 1p/19q Co-Deletion, and MGMT Promoter Status Among Glioma Patients Using MRI*
- **Annual Congress of the Iranian Medical Council 2024**, Oral presentation, *Predicting Epidural Hematoma Expansion from Brain CT*

## Technical Skills

- **Programming:** Python
- **Version Control & Deployment:** Git, GitHub, Streamlit
- **Libraries & Frameworks:** PyTorch, TensorFlow, Scikit-learn, Pandas, NumPy
- **ML/AI Methods:** Deep Learning (CNNs), LLM, VLM, ML, Conformal Prediction, Uncertainty Quantification
- **Medical Imaging:** MRI/CT Image Processing, Segmentation, Feature Extraction, Registration
- **Research:** Study Design & Method Planning, Statistical Modeling, Scientific Writing

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## References

### **Dr. Shahriar Faghani**

Department of Radiology, University of Pennsylvania, Philadelphia, PA, USA  
Adjunct Assistant Professor, Department of Radiology, Mayo Clinic, MN, USA  
[Email](#), [Scholar](#), [LinkedIn](#)

### **Dr. Mana Moassefi**

Adjunct Assistant Professor, Department of Radiology, Mayo Clinic, MN, USA  
Diagnostic Radiology Resident at Mayo Clinic, Rochester, MN  
[Email](#), [Scholar](#), [LinkedIn](#)

### **Dr. Meysam Tavakoli**

Assistant Professor, Department of Radiation Oncology, Emory University  
[Email](#), [Scholar](#), [LinkedIn](#)