

ORGANIZATIONAL STRUCTURE

The Core for Artificial Intelligence in Pediatric Imaging is divided into two main groups: research and clinical implementation. The Core is led by a pediatric body and neuroradiologist, Dr. Susan Sotardi. She received formal training in machine learning methods through her Master's degree in Data Science from the Department of Engineering at the University of Pennsylvania. Dr. Sotardi reports directly to the Radiology-in-Chief and Chair, Dr. Kassa Darge. The Core's Research Team includes a research scientist with specific training in machine learning methods, a data scientist, clinical research fellows, a research assistant, and a program coordinator. The Clinical Implementation Team includes the Department of Radiology's Director for Radiology Informatics and AI, the Vice Chair of Administration, and the PACS Manager.

The AI Steering Committee meets quarterly to advise the Director of the Core regarding modifications to the strategic plan and its implementation. The steering committee is comprised of the Department of Radiology's Director of Informatics and AI, Vice Chair of Clinical Operations, Vice Chair for Clinical Research, Vice Chair of Imaging Research, and Vice Chair for Administration, as well as other members of our research community.

Contact Information

Core for Artificial Intelligence in Pediatric Radiology
Roberts Research Center, 3rd Floor

Coordinator: Ms. Sydney Wieczkowski at Wieczkowss@chop.edu

Director: Dr. Susan Sotardi at sotardis@chop.edu

LEADERSHIP OF THE CENTER FOR ARTIFICIAL INTELLIGENCE IN PEDIATRIC IMAGING

AI Research Team

Founder - Kassa Darge, MD, PhD

Director of Informatics & AI - Susan Sotardi, MD, MSE

Program Manager - Tigist Hailu, MPH

Program Coordinator - Sydney Wieczkowski, BA

Research Scientist - Vahid Khalkhali, MS
(PhD candidate)

Data Scientist - Michael Welsh, BS

Clinical Research Fellow - Patricia Rafful, MD, PhD

Research Assistant - Dana Alkhulaifat, MD

AI Implementation Team

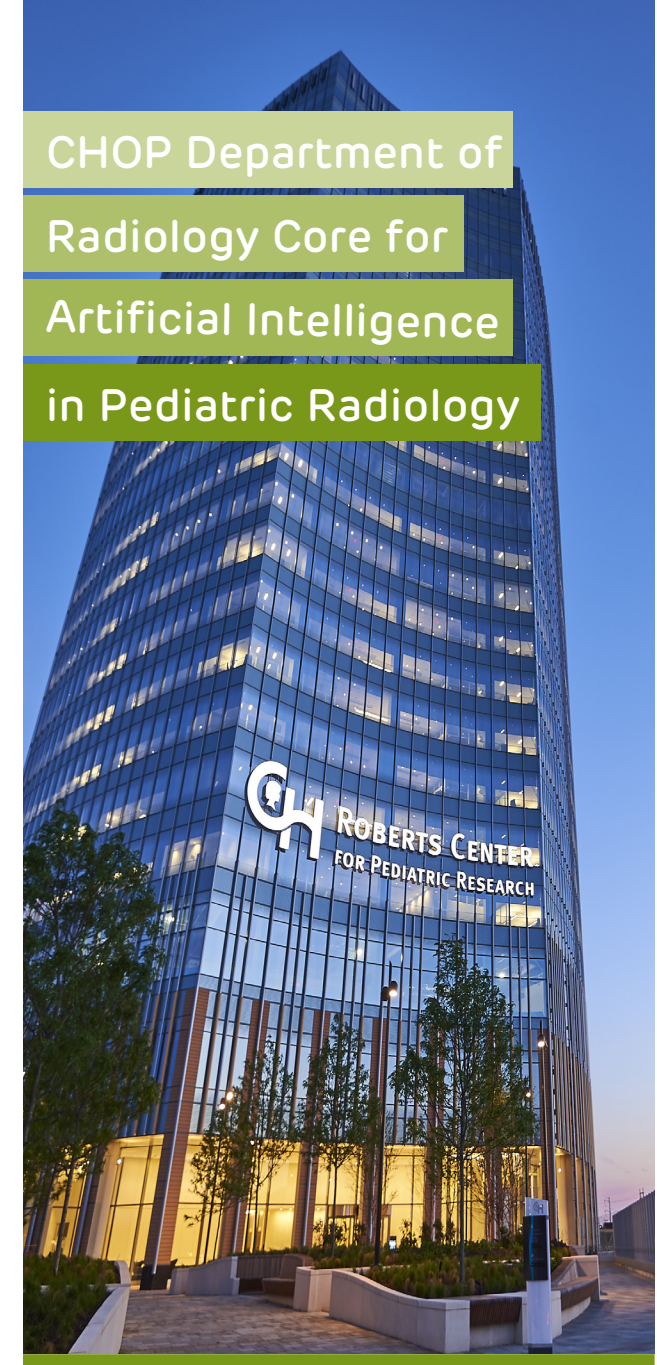
Director of Informatics & AI - Susan Sotardi, MD, MSE

Vice Chair of Administration - Parvez Kazmi, MD

Director of Radiology Systems - Suresh Nair, BS (RT),
MCA

Supervisor for Radiology Systems - Cathy Egan, MIS,
MBS, HCA

CHOP Department of
Radiology Core for
Artificial Intelligence
in Pediatric Radiology





CHOP Department of Radiology
AI & MACHINE LEARNING

OUR VISION

Artificial intelligence (AI) has the potential to dramatically improve the ways in which we practice medicine. The Children's Hospital of Philadelphia (CHOP) Department of Radiology is uniquely poised to lead this transformative process for our field. Our vision is to establish the leading center for AI research and implementation in pediatric imaging. The CHOP Department of Radiology Core for Artificial Intelligence in Pediatric Radiology will lead in the application of artificial intelligence to pediatric imaging. Through our comprehensive AI expertise, the Core will strive to improve patient experience and outcomes, by fulfilling the needs of AI stakeholders, including CHOP radiologists and clinicians, as well as the larger CHOP community and inter-institutional collaborators.



Susan Sotardi, MD, MScEng

Director, Radiology Informatics and Artificial Intelligence (AI)
Department of Radiology
Department of Biomedical and Health Informatics
Children's Hospital of Philadelphia
Assistant Professor of Radiology
Perelman School of Medicine,
University of Pennsylvania

MISSION STATEMENT

Our mission is to transform the practice of pediatric radiology through artificial intelligence by improving efficiency, quality, and innovation. This mission is founded upon the principles of excellence in research, reliable implementation, multidisciplinary collaboration, and education.

Excellence in Research

- To set the standards for scientific and ethical merit in the application of AI to pediatric radiology research.
- To design and validate exceptional machine learning tools for clinical use.
- To provide AI scientific expertise across pediatric imaging modalities and radiology subspecialties.
- To foster an AI research environment within the CHOP Department of Radiology, as well as through radiology-related collaborations with other departments and institutions.

Reliable Implementation

- To provide support for radiology practice, operations, and workflow improvement.
- To reliably deliver commercially available AI image analysis tools for clinical use.
- To encourage vendor collaborations through specific use agreements.

Multidisciplinary Collaboration

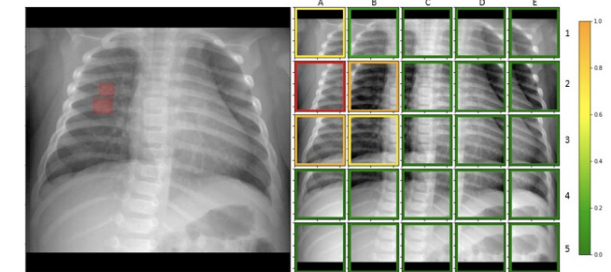
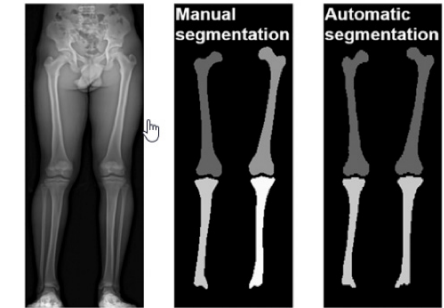
- To provide access to AI radiology expertise for CHOP radiologists and their clinical collaborators.
- To support multi-institutional and international collaborations towards the development of AI clinical standards in pediatric imaging.

Education

- To provide AI education and resources for pediatric radiologists, trainees, and researchers.
- To facilitate adaptation of AI in clinical practice, research, and medical literature.

OUR RESEARCH GOALS

The primary objective of our research in AI is to design and implement excellent machine learning tools for improvement of clinical pediatric radiology. Specifically, our research interests focus on pediatric-specific diseases, with applications such as child abuse imaging, epilepsy research, and the automation of pediatric radiology measurements.



OUR RESEARCH INFRASTRUCTURE

The Department of Radiology at CHOP is strategically poised to occupy the important role of leading in AI research. We support a robust clinical research program, with one of the most distinguished groups of pediatric radiology experts in the world. Our attending radiologists are profoundly committed to providing expert guidance in radiology research, with demonstrated track records of publication success. The Department of Radiology maintains one of the largest pediatric imaging databases in the world, which serves for the development of AI models. Furthermore, the CHOP data management team, Arcus, and Department of Biomedical Health Informatics (DBHI) provide high-performance computational resources. Lastly, as part of the CHOP Radiology Clinical Research Core (CRC), the Core for Artificial Intelligence in Pediatric Imaging has access to research technologists, physicists, a biostatistician, a medical writer, a medical illustrator, a grant support team, and a multimedia specialist to support faculty, fellows and PhD researchers with their research work.