

Pittsburgh Center for Artificial Intelligence Innovation in Medical Imaging

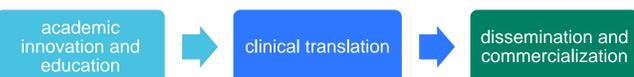
Shandong Wu, PhD,
Lead Investigator, Department of
Radiology, University of Pittsburgh

Motivation

- 90% of all healthcare data comes from medical imaging. More than 97% goes unanalyzed or unused.
- Artificial Intelligence (AI) is the new revolutionary technique for medical research and is reshaping tomorrow's clinical practice in medical imaging
- Opportunity for medical imaging AI at Pitt
 - align goals of researchers and clinicians
 - facilitate cross-unit collaboration
 - synergize multi-disciplinary expertise
 - share data and resources

Project Description

- Unify a multi-disciplinary team from Pitt schools of Medicine, Engineering, and SCI
- Scale our competitive and complementary research efforts in computational/engineering and clinical sciences
- Pursue targeted large-scale external funding from multiple sources: NIH P41 and T32.



Context

- Pittsburgh has talents, technology, data, clinical resources, and AI ecosystem, but lacks an imaging AI collaboration hub.
- The imaging AI Center engages more than 70 members from 12 academic and departments at Pitt/UPMC/CMU, including 28 clinicians and 44 researchers.
- Strong partnership with Pittsburgh Supercomputing Center, UPMC Enterprise, Pittsburgh Health Data Alliance, Pitt CTSI, Center for Military Medicine Research, Center for Biologic Imaging, Pitt CREATES, Pittsburgh Liver Research Center, etc.



Primary project goal

advance innovative imaging
artificial intelligence (AI) research,
clinical translation, and
commercialization by synergizing
computational expertise and
clinical resources at Pittsburgh



Project Deliverables

- **Year 1:** monthly meetings/seminars to discuss current/existing research/projects, ideas, clinical needs/pain points, and solutions; Exploring funding opportunities and fostering sub-groups of interest for collaborations on specific ideas; Crafting pilot projects to implement by the Momentum Funds for potential inclusion in the NIH P41 center grant application; Starting to publish together to build collaboration track records.
- **Year 2:** Year 1 academic activities continue; Identify competitive projects from the funded pilot projects and form strong investigator teams for the P41 application to be submitted by the end of Year 2; Organize an AI symposium.

Potential Impact

- Will bring researchers, clinicians, entrepreneurs, and students/trainees together to collaborate and perform workforce development in medical imaging AI projects;
- Will build a shareable infrastructure which benefits the Pittsburgh community by advancing knowledge; improving patient care, accelerating commercialization development, creating jobs, and enhancing educational innovation;
- Will develop multi-disciplinary projects and forms competitive teams to pursue large research program funding;
- **Ultimate outcome:** a world-class imaging AI research and translation center to significantly expand the medical imaging AI research and industry ecosystem in Pittsburgh through sponsored research and to start new AI companies that enable healthcare providers to provide higher quality patient care at a lower cost.

Acknowledgements

