



# FW-HTF-R: Clinical Skill Acquisition, Adaptation and Atrophy with Artificial Intelligence Aids

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As artificial intelligence applications (AI) increase, it is increasingly likely that many future workers will collaborate with an *AI assistant* (AIA). This project seeks to understand whether, and how, *human* skill acquisition, adaptation and atrophy is affected by AIAs, and how this aspect can influence AIA design in clinical settings.

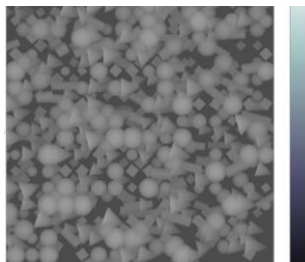
**Future Tech Question:** How can AIAs be designed to improve human skill acquisition?

In progress:

- Experiments with different AIA modalities and performance characteristics to provide feedback during skill acquisition

Future Directions:

- Evaluate AIA UI designs
- AIAs that improve adaptation and reduce atrophy



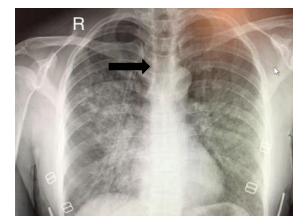
**Future Work Question:** How do AIAs enable new work areas and change current ones?

In progress:

- Experiments in new work areas enabled by AIAs, such as surgical robotics
- Experiments to understand how existing work, such as visual search in radiology, are affected by AIAs

Future Directions:

- Generalize learned principles to other areas



**Future Workers Question:** How do workers acquire and apply skills when an AIA is present?

In progress:

- Experiments to study how human skill acquisition is affected when humans interact with AIAs

Future Directions:

- Discover the conditions under which human skills atrophy and skill adaptation is hindered

