
JANICE NEWSOME & ZACHARY BERCU

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Required Skills:

Web App Development, Responsive Web Design, FHIR, mySQL, Android/iOS, web content (HTML5, PHP, etc.), Project Management, Communications

Preferred Team Communications:

Weekly or as needed

Data Sources:

TBD.

Other Items:

Familiarity with data retrieval from the EHR or radiology database adhering to strict requirements for encryption and access.

Familiarity with mobile push systems and surveys.

Familiarity with databasing and analytical interface creation.

Project has timezone flexibility. Mentors and students will determine a good time for virtual meeting.

Intellectual Property: TBD.

TRAINEE PROCEDURAL PROFICIENCY / GRADING PROJECT

Surgical specialties, including our field (Interventional Radiology; IR), are based on an apprenticeship model of education. How do we know a trainee is safe to perform the procedure? How do we know when they have developed competence or, ideally, excellence? Written exams only test knowledge. Quarterly cumulative committee assessment has no granularity given recall bias and aggregation.

PROJECT OBJECTIVES

To create an ease-of-use assessment module for individual procedures to track trainee progress.

SUCCESSFUL PROJECT

The solution would scrape information from the electronic health record (HER) on procedures performed by residents and fellows. This module would then send infrequent push reminders to the attendings to grade trainee proficiency using a simple system: A) Top 1-2% of all performers; B) Top 5%; etc. The simplicity and use of mobile device would improve evaluator participation. Trainers would grade trainees based on levels of entrustment to perform a certain task. This could then be translate to a percentage of all performers. The information pushes would need to be frequent enough for granularity but not so frequent as to fatigue evaluators. An interface would be able to summarize data and track progress over time.
