
JON DUKE

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(YES THE SAME JOHN DUKE AS IN THE LECTURES)

Required Skills:

Web App Development, Stand Alone App Development, Java Coding, Python Coding, Responsive Web Design, Human Centered Design, Open Source Databases (MySQL, MariaDB, etc), Project Management, Technical Writing, Communications

Preferred Team

Communications:

TBD

Data Sources:

FHIR resources, SPLICER/LAERTES adverse reaction data.

Other Items:

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

CLINICAL DECISION SUPPORT FOR DRUG SIDE EFFECTS

Patients often take multiple medications and can experience side-effects from minor to severe. Given the number of side-effects known per drug (average 70, range 20-535), it can be extremely challenging for a doctor to recognize what drug may be causing a given side-effect. Moreover, they often don't even recognize a patient symptom as a side-effect at all. This can lead to delayed diagnosis and treatment as well as decreased medication adherence.

PROJECT OBJECTIVES

Develop a FHIR-based clinical decision support solution that informs providers of which of their patient's medications may cause the patient's "chief complaint" or other diagnoses.

SUCCESSFUL PROJECT

Web based app that pulls data on patient diagnoses and medications as well as data on labeled adverse drug reactions (side-effects). The app would connect these two data streams to deliver contextual guidance with an effective UI design. Can integrate machine learning etc if desired

Intellectual Property: Students own the project IP.

