
ANISH S. SHAH &
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[HTTP://WWW.BMI.EMORY.EDU/NEMATI](http://www.bmi.emory.edu/nemati)

Required Skills:

Python Development, Java
Development, Project
Management, Communications

Preferred Team Communications:

Skype, Google Drive, etc

Data Sources:

We will work with the GaTech FHIR
server (which includes the MIMIC
database).

Other Items:

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

OPTIMAL PRESSORS AND FLUIDS DOSING

Clinical medical decision-making is an imperfect science influenced by numerous factors including: incomplete knowledge of critical care physiology and varied patient response to standard of care. Most patient care protocols are derived from population-based studies and may be inappropriate for certain patients. The optimal treatment strategy for volume resuscitation and vasopressor medication dosing of septic patients remains a subject of ongoing controversy. We hypothesize that a machine learning approach to fluid resuscitation and vasopressor dosing that adapts to patient-specific clinical states can improve survival of septic patients in the critical care setting.

PROJECT OBJECTIVES

To design a cross-platform pressors and fluids dosing application.

SUCCESSFUL PROJECT

We propose a FHIR-enabled streaming analytic application that is capable of interfacing with a FHIR server, calculates the optimal dose of pressors and fluids for each patient, and displays it on a SMART-on-FHIR user interface.

Intellectual Property: TBD