

**Health Informatics Seminar Series**  
**(INLS 890-260)**  
**Machine Learning, AI and Medicine**  
**Spring 2018**  
**University of North Carolina at Chapel Hill**

**Day/Time:**

Tuesdays, 3:30 – 4:45 PM

**Location:**

HSL 333

**Faculty:**

Ashok K. Krishnamurthy, PhD  
Research Professor, Computer Science  
Deputy Director, RENCi  
University of North Carolina, Chapel Hill, NC 27517  
voice: +1 (919) 445-9643, email: [ashokk@ad.unc.edu](mailto:ashokk@ad.unc.edu)

**Office Hours:**

By appointment

**Course Website (on Sakai):**

<https://sakai.unc.edu/>

**Target Audience:**

Graduate students interested in biomedical informatics.

**Prerequisites:**

Instructor's Permission

**Course Description:**

Brief description: The primary aim of the course is to introduce doctoral and postdoctoral level students to the current state of the art in the use of Artificial Intelligence and Machine Learning methods in the Health Sciences. Medicine and the Health Sciences in general are at the forefront of the so called "Data Tsunami." The near universal adoption of Electronic Health Records systems, the availability of payer and other administrative data, various "omics" data sources, and the wide and quick adoption of "fitness" oriented devices and apps requires the use of machine-driven techniques to manage and make sense of the data so that it can be brought to bear to affect health. The primary objectives of this course are to survey the field and collectively arrive at a position paper that captures the current state of the art in the area and identifies future directions.

## **Course Requirements**

The students and the instructor will collect, summarize and present work from the current research literature that captures how AI and Machine Learning are being used in Medicine and Health. The application areas will be drawn from the areas of interest of the students, and can include any area in the health sciences. Students are expected to lead the discussion of at least one of the papers during a class session. They are also expected to contribute to the position paper that will be jointly authored by the class participants. There will be guest lectures during the semester, and students are expected to provide a short summary of the lecture.

All course related material will be made available on the course Sakai web site.

Student grades will be based on the collective course requirements outlined above.