MEng Design Project Announcement – 2017-18 AY

Project title: Automated Analysis of 3D Chest CT images

Brief Description of Design Project Goals:

Overview:

The general project theme is to implement fully automated computer algorithms to identify clinically relevant regions in 3D human CT images of the chest. That is, to design, develop, and evaluate algorithms that will reliably detect image regions and make diagnostic measurements on them. There are several individual projects: segmentation of the scapula, identification of nodules in sequential image scans and identifying homogeneous regions of fat and muscle. Note, Prof Reeves will be on sabbatical leave in the Spring 2018 semester.

Specific MEng Contribution:

The project is being managed by a PhD student. The project will contain three main components: (a) development of the computer algorithm, (b) design of an experiment to evaluate the algorithm, and (c) optimization of algorithm performance through experimentation.

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- Office - 392 Rhodes Hall

Project Web Site: http://www.via.cornell.edu/students.html

Number of MEng Students Needed: 0-2

Required Skills:
Self starting person, motivated, interest in computer vision and machine learning; will need to take ECE 5470 “Computer Vision” in the Fall to gain experience in image analysis tools, UNIX and C programming. Must be able to be productive when working with minimal supervision.

Estimated Project Time Frame:

2017-18 Academic Year, Two to three Semesters