Anindya Gupta

Brief report on 23 Summer School on Image Processing (SSIP)

The 23rd Summer School on Image Processing (SSIP) was held between July 9, 2015 and July 18, 2015 in Szeged, Hungary, organized by the Department of Image Processing and Computer Graphics, University of Szeged (further information can be accessed on: http://www.inf.u-szeged.hu/ssip/2015/index.html). During the summer school, internationally renowned researchers/ Professors in various fields of image processing and computer vision gave lectures; such as "Andrew Todd-Pokropek on Why try to quantitate (medical) images", "András Hajdu on Retina image analysis", "Attila Fazekas on Face detection and facial gesture recognition", "László Ruskó on Image segmentation techniques for medical image processing", "László Szirmay-Kalos on 3D reconstruction with depth image fusion" (full list can be accessed on: http://www.inf.u-szeged.hu/ssip/2015/lecturers.html). Additionally, the lecture session was followed by the project session wherein every student was grouped with four other international students on the basis of their project choice. Significantly, I worked on the Retina fundus image processing project and was grouped with four other members from Croatia, Romania, Hungary and Montenegro. We created a standalone application based on proposed methodology for the segmentation of blood vessels in the retinal fundus images to detect the Diabetic retinopathy (DR), which is one of the leading disabling chronic diseases, and one of the leading causes of preventable blindness in the world (complete project can be accessed on: http://web.info.uvt.ro/~spataru.florin/team_c/index.html). The methodology was tested on the one of the significant databases (DRIVE). Statistically, we have achieved an average accuracy rate of 94%. All projects were evaluated by a committee of lectures on the last day. In addition to the project evaluation, there was an exam to assess the individual theoretical knowledge about the lectures taught during the summer school.

Organizers also organized one excursion program on July 12, 2015 (Sunday) where they took all participants to one Museum which is one of the biggest Museums in Hungary for old and vintage computers and for some hiking (images are enclosed in the report).

Conclusively, the ten days SSIP summer course program offered by University of Szeged provided me the rare combination of accelerated knowledge growth and the experience to get on the challenging path of developing image processing based applications. Especially there, various 3D reconstruction techniques and medical image segmentation techniques taught by the pioneering tutors in an outstanding environment will definitely help me to move on with my current work.

Some pictures from the lectures of summer school
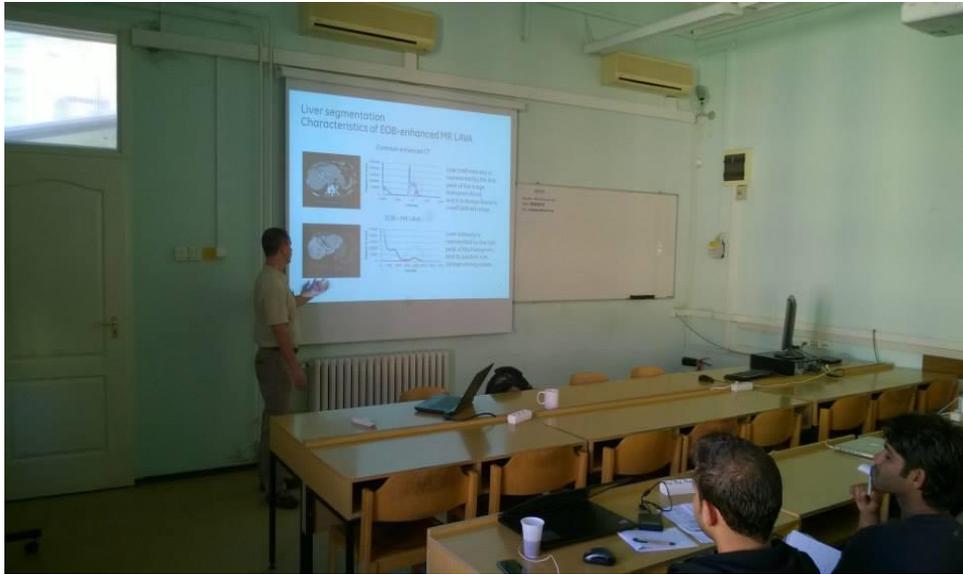
Project Evaluation (Presentation assessment of my team)

Some Pictures from Excursion