

# Meeting Report of RACV 2016

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2016.9.18-2016.9.20

RACV 2016(Research and Application in computer vision 2016) is a grand academic meeting in the field of computer vision.It's aim is to provide an interactive communication platform, to promote the field of academic exchanges and the communication between academia and industry.This is my first time to join so excellent activity. I am glad to take part in RACV 2016 in Shanghai.

After we finish registering, we study wall newspapers and talk with these doctors.Most wall newspapers are based on deep learning.One of these papers is related to image reconstruction.I learn that they take hundreds of photos around the object and select part of them, then they translate these RGB images to depth image, according to use these depth images, they can start their work.But when we do this underwater, due to the complex environment, we can't get so many photos and use them easily, so I can't use this method directly.

Lihi Zelnik-Manor is the first professor to make speech. Her talk is so interesting.She introduces her recent years' scientific research achievements. I learn that she major in how to search methods for matching image features and find the important pixels in an image or video.What I remember is that she begins her speech with a very funny game.She shows us a short video showing a donkey on the road and then asks us how many motorcycles passing in this video.The problem is so eccentric that we can't react quickly.The reason why she does this I guess is that she wanted to introduce her job indirectly and actively.This is also what I need to learn.When I make a speech in the future, I need to use this method. Then she shows us some ways to deal with different pictures, for example, how to select good pixels ,how to translate a picture to painting. Later, she listed many points about the important of image processing ,such as pattern distinctness, color distinctness and organization priors.When I am listening to her, I know that owning the ability of spoken English is so necessary. No matter where I will work and what my work is, good spoken English is a chance which will lead me to success.

Another professor who gives me a deep impression is Shiguang Shan.He says that with the development of face identification, advanced thoughts should be adopted by us, we don't need to distinguish face identification from object recognition, because they have same solution now.He impresses the changes after 2014 in object identification.I have learned that when we do some projects, we classify our pictures to two types in the past, now we can get a lot of kinds, such as face, body, horse, sheep and so on.Similarly, when we want to start our work, we need to check all points and locations in the picture in the past, but now we only need to check points and locations we need by the advanced codes.These basic knowledge is so important to me that I can't understand by books easily.Then he tells us the development of face identification and

some knowledge about the process of face identification. Because I am a newcomer in this field, I can't get the point, I need to study harder in next stage. In the end, he introduces the new face identification method by depth learning. Depth learning is so hot, I think I need to learn, it will be benefit to my study in the future.

Professor Quan Long majors in computer vision. He has finished a lot of works about 3D reconstruction from images. He introduces many methods about this. Such as a Quasi-dense approach, point clouds into projects and so on. His team has finished a system which can reconstruct a whole 3D city models by photos with overlapping in 2014. Then, he shows a large-scale reconstruction examples. At last, he shares a global portal for user-generated 3D models from drone photos—altizure.com. We can register freely. It can create personalized 3D model automatically when users upload images.

Though I can't totally understand what these professors' speeches, but I also learn a lot skills. First one is how to show our thoughts clearly and convincingly. When I narrate my viewpoint in the future, I should know what is my main idea and insert them to my speech quickly. Next one is that I need to have humorous reaction when people have a tough question. When professors are asked questions by others, they can design a perfect answer and respond wittily, I need to learn more about this area. I also learn that finishing a work by myself is difficult, communication is important, no matter what work I do, I need to communicate with others more.

We take part in a report of contest at 2 p.m. on September 19. Participants come from many different schools, such as Tsinghua University, Peking University, Zhejiang University and so on. One of questions is Video Object Detection. They both use Faster R-CNN to solve these problem. Three tough difficulties need to be solved. First one is to identify small object. Same thing will have different shape in a video. The large one has more information to calculate, but we even can't find the small thing through our eyes, so this is a big problem. Next one is difference of aspect ratio. Although there are only three types' cars to be identified, but their aspect ratio differs in many ways. Now there are only 3 fixed aspect ratios in anchor of RPN: 0.5, 1.0 and 2.0, we don't have enough database, so this is a barrier they need to get over. They also overcome some questions about image procession. For example, they use affine transformation to solve the slant number plate, they use interpolation to enhance the pictures and so on.

According to study in Shanghai, I have learned so much. Firstly, Deep learning is more and more hot. No matter what I will do in the future, I need to learn some knowledge about it. Next one is ability of English. When I listen to professors who speak English, I can't get what their main idea. To relieve this condition, I will download APPs on my computer and phone, then I will learn TOEFL Listening and other resources every day. If I have spare time, I can read vocabularies of our major. Third one is working hardly. Due to accumulation of these years, every professor has their own system of study, they can narrate their report confidently and clearly. No matter what I do in the future, I need to set a goal and work all the time. The last one is skill of

PPT.It' s important to improve my ability of making and introducing PPT. A beautiful PPT will attract others' eyes and make audiences understand the main idea easily. An excellent PPT needs reasonable composition and concise design, no one wants to see an article on PPT, so I need to write little and use figures more.When I introduce my PPT, the most important thing I should do is to master the main idea and speak it clearly.In my next study stage, I will enhance my ability of English and coding to become better and better.