James Tompkin

1. Tell me about yourself

I live in Beijing and stayed here till the end of the high school, and I went to Pomona College in California for undergraduate education. It’s a small liberal arts college east from LA. Really liked the experience there.

I’ve always had a strong interest in visual arts. At the beginning of the college, I was a film studies major. I also made quite a few short videos in high school and college, some of which won awards.

But later in film history classes, I realized that technology played a huge part in the development of films. I also saw a lot of works that had great use of special effects, such as Avengers, Zelda breadth of the wild, Assassin’s creed Odyssey, and another thing that really changed my interest was SIGGRAPH 2019 in LA. It was a great experience. First, I found research was really cool; second, I realized that there were so many exciting possibilities in visual art that still remain uncovered. Special effects right now are cool, but still not enough, and VR is just at the beginning. I wish to push the advancement of light field capturing, real time rendering, view synthesis in order to let people experience the virtual world the same way they experience life. I also wish to innovate the way people create 3D visual artworks, which is in the field of HCI. And that is what brought me to do research and apply for the visual computing lab at Brown.

Right now, I have knowledge in computer vision, computer graphics and machine learning. Research wise, I did facial recognition, one in accelerating neural rendering with meta-learning, another HCI project in AR vocabulary learning with annotation. Right now, I’m doing my math thesis in sampling methods for computer graphics.

2. Tell me about the XXX research project you did. (See slides)

3. Which specific fields are you interested in? Why?

At this point, my major interest is in VR, and I’m mainly interested in two kinds of research: I wish to push the advancement of light field capturing, real time rendering, view synthesis in order to let people experience the virtual world the same way they experience life.

I also wish to innovate the way people create 3D visual artworks, and that is in the field of HCI. And that is what brought me to Brown visual computing lab.

4. Why are you interested in our school?

Brown visual computing lab has a well-rounded expertise in computer vision, computer graphics and HCI.

5. What are your strengths and weaknesses? What would you consider to be your greatest accomplishment?

My major strength is a well-rounded knowledge in visual technology. I have research experience in eye tracking, computer vision, neural rendering and HCI. I also have knowledge in computer graphics. And because of these experience, I also developed my coding skill in various languages. I have a sense of what a research feels like in each of the fields. And I think this diversity definitely prepares me for various kinds of future projects.

My weakness, which sometimes could be a strength, is my persistence. When I face obstacles, I’d just take a break, go for a walk and come back keep doing it. However, because I’m very stubborn in implementing my plans, I neglect to think about whether I should change my plan, or if there’s another problem causing the current trouble. That kind of happened in my neural rendering project. When I successfully implemented the meta-learning model, the result was not ideal, and I thought it was the choice of the model that didn’t work, so I implemented another one and still didn’t work. Eventually, it turned out that my data was not enough so the model was over fitted. In the future, I will always think about other possibilities leading to the problems instead of straight going into it.

6. You career plan after PhD?

I will first join some big companies like Google, Adobe or even NVIDEA, as a visual researcher, to further broaden my sights in the field and generate some directly applicable works. After that, I wish to develop the next generation of technology for visual art. So, I have mainly two plans: first, I could be a professor like you, in a university with both good art department and technology department, such as NYU, USC, etc. Second, I could start a company making next-generation special effects, or sth like a Pixar, which makes movies and develops technology. Ideally, I can do both. We’ll see. Who knows what will happen in the next decade.

7. Why do you want to do a PhD?

I want to help develop or even lead the technology for next generation of digital art, and that is no easy task. One really needs to know what’s going on in the academia and the industry right now, how to ask the right questions, what can be solved and what cannot be solved even when you don’t know the solutions, how to solve the problems and how to solve problems in a team. All these are hardcore-practiced in a PhD. But most importantly, I know I want to study this subject, and I think I will enjoy the next 5 or 6 years.

8. Questions for me?

What is a multi-sphere image?

What do you think is the next big challenge in VR?

What is your working mode? Is it more hands-on or hands-off? Do you plan to give me specific projects, or just guide me in high level directions?

What is Brown MSc like? How long is it? Is it the same as a first-year PhD or I also need to take classes? Where do MSc students go to when they graduate?

What are you going to do, topic wise, in the near future?

What is your expectation for a graduating PhD?

怎么能毕业？对毕业的期望？你对学生的产出期望？（是必须要best paper还是怎样）

*Do you have RAship? Or are there more TA in general?*

How many PhD students do you plan to have in this year?