

STATEMENT OF PURPOSE

From the viewpoint of not only appreciation, but creation, digital art — graphics, animation and music — have long fascinated me with their high capability and expressibility since my childhood. As a kid who gained much sense of achievement by exhibiting his works to friends, I worked on many extracurricular projects in webpage designing, obtaining valuable experiences in digital image editing. Later, amazed at the features produced by animation studios like Pixar and Dreamworks, I self-studied the creation of three-dimensional computer graphics(3DCG), and led a team to give introductory lectures about 3DCG at the information club of my high school. These were also the years where I had fun toying with midi keyboards and audio editing softwares, trying to compose my own pieces of music. Through vigorous exploration, I realized that the strength of computers as tools for artistic productions lies in its ability to generate complicated effects with sophisticated simulations, and that the weakness lies in the difficulty in translating artistic intentions into programs and discrete sets of parameters. Hence, I aimed at narrowing the gap between technology and people so that digital artists can concentrate more on their works rather than their skills, and thus unleash full power of computation on artistic purposes.

My passion for digital art, especially for 3DCG, motivates me to dive head-first into a series of challenging courses in the university curriculum. These include "Digital Image Synthesis", "Digital Visual Effects", "Computational Photography" (lectured by Professor Yung-Yu Chuang), "Interactive Computer Graphics" (lectured by Professor Ming Ouyang), "Digital Image Processing" (lectured by Professor Ming-Sui Lee) and "GPU Programming" (lectured by Professor Wei-Chao Chen). I worked hard, particularly in the aspect of term projects, where I and other members in my team had great times hunting for interesting research papers about computer graphics, implementing the algorithms and adding our own touch to them to improve the result. (...)

(The lighting-by-guide project.)

As I originally enroll in university to study chemistry, a compromise for not doing well enough on the college entrance exam, I strived in my freshman year and got qualified in double-majoring computer science. While creative innovation and careful system analysis are the backbone of engineering, the ability to think critically and accurately is strongly emphasized in the field of natural science like chemistry. I got the best of both worlds. I joined the theoretical chemistry lab led by Professor Yuan-Chung Cheng, where we verified novel designs of ultrafast nonlinear electronic spectroscopy by simulating quantum dynamics of molecules interacting with light. The work experience at the junction point of computer science and chemistry enables me to formulate and implement physically accurate models on computers.

(...)

Personally, I am aspired to a career as an artist more than a scientist or engineer. I enjoy creating and telling stories, expressing my love toward great things in life. I collect preliminary ideas on my blog and gradually develop them into complete works. In my senior year, I voluntarily participated in the graduate musical of the chemistry department as the director, where I led a brilliant team to write the scripts, to compose the scores, and to design the stage from scratch. (...)

I aim at (doing something) in my graduate studies.