STATEMENT OF PURPOSE

Computer scientists and artists are alike. Just like artists express their unlimited imaginations on their works, computer scientists create programs to express their own kind of imaginations, which is about a better world with advanced technology. They are painting and composing touching melodies to demonstrate their imaginary paradises by devising new algorithms and writing lines of code.

Being a well-educated computer scientist as well as a music creator, I began another round of soul searching, trying to figure out my goal of life after graduating with excellent performance from the top university computer science program in Taiwan: The Computer Science and Information Engineering department in National Taiwan University (NTU CSIE).

Finally, the answer emerged, in company with my great desire to benefit this world by applying what I had learned to humans’ daily lives. I long for catalyzing the world’s evolution to become a high-tech wonderland with my creativity and knowledge in Artificial Intelligence. Therefore, I believe Stanford, the world’s leading academy and abundant in creative energy, will be my beset next step to pursue my ideal.

My interest in AI was ignited by the university courses. In addition to famous AI products such as Roomba the smart vacuum cleaner and Mars Rover, one application I saw in AI course deeply fascinated me. It was the project Inner House AI for Elders: smart equipments were installed everywhere in the house to detect the health conditions of old people living in the house, and ensure their safeties.

This idea was so attractive to me, as this kind of application leads to more convenient human lives, yet never forgets to take care of humanity issue. Elders might feel uneasy with a human house care, and thus using computers as alternatives seems a perfect solution to provide elders with safer living environment. With AI, computers are no longer cold machines; they become guardians, housekeepers, or even friends that keep good company instead.

For me, AI will certainly be my greatest tool to benefit the whole world. The slogan proposed by Nokia goes great: Technology always comes from humanity. AI is there to play the role of aiding humans through their lives, and appropriate usage of this technology will bring about a great deal of smiling and happiness, elevating people’s living standards. I, being a computer scientist, am absolutely responsible for letting more people enjoy the consequences of technology.

My enthusiasm for AI supported me to conduct AI research. In my senior year, I entered the AI lab in our department and began researching under the supervision of Prof. Jane Yung-Jang Hsu. My partner Shoo-I Yu and I cooperated to research on “Tag Recommendation”. Tags were said to be useful for searching and document administration, but most documents on the Internet lack tags, and what we wanted to do was automatically put tags into documents. We used a machine learning approach to guess the appropriate tags of a document according to the training data in which documents were already aged by some users on the Internet.

Starting from investigating related papers about tag recommendation, we found defects in traditional recommendation methods, and thus proposed our algorithm as a better solution to these defects. Being new to tag recommendation issues, I found it hard and sometimes frustrating when conducting the research project.

However, all our efforts paid off as we published the full technical paper “A Content Based Method to Enhance Tag Recommendation” accepted for oral presentation in IJCAI ’09 held in Pasadena, California. Successfully publishing paper in such top conference was an great encouragement for me because it proved that even though I was just an undergraduate, I was still capable of conducting research well. Moreover, it also provided me with a chance to expand my view to AI in IJCAI ’09 where AI masters all gathered to propose their own brilliant ideas and give inspiring talks.

Beside my passion and achievements in AI, for long I had been searching for my most important value in computer science. Having learned music for over ten years and even won 1st prize in the largest music creation competition for university students in Taiwan, I found out my most unique assets distinguishing me from others might be my creative mind. This precious gift provided me with unlimited inspirations in my work and life. While pursuing knowledge in computer science, I reminded myself to keep being creative in this academic field. Computer science results in the evolution of this world, and only through novel thoughts would computer scientists bring about more vigorous outputs that will benefit the human kind.

In university, I treated all computer science related projects seriously as they were the crystallized treasure of my creativity, and the final results always proved that these “pieces of work” were highly appreciated by professors, engineers, and even artists. For example, four other students and I implemented Probabilistic Latent Semantic Analysis (PLSA) to build a semantic search engine for food in our junior year. This search engine searched documents that were semantically related to user queries, and thus querying “cake” might result in documents about “tiramisu”.

This project was elected by Google engineers as one of the top 3 projects in the course, gaining our admissions to present in Google’s headquarter in Taiwan, which was an extremely wonderful present for our efforts. This event taught me a lesson that simple techniques could be surprising as long as combined with creativity. I have the ability to create good music and fascinating projects, and I believe I can decorate and benefit this beautiful world with my creativity through AI applications.

/\* School Specific Description and will be modified

*What excites me about Stanford is the comprehensive coverage of AI by the Stanford AI Lab (SAIL). Moreover, Stanford provides an extremely free environment for students to research and learn. This better motivate students to pursue higher academic achievement. XX*

I am not a saint that can do whatever good to this world; however, I am a skilled computer scientist as well as a creative dreamer and practitioner, and I believe Stanford is an irreplaceable academy in realizing my dream to contribute to this world. Requiring a solid academic background, I believe I can pour more energy into the field of computer science with my distinguishing trait – creativity. I have a full list of practical experiences, enthusiasm for advanced knowledge in the AI field, and most importantly, a perspective vision to embrace the future technology. Having the motivation and ability to thrive in Stanford, I am well prepared to study in your esteemed university, and I believe I will be your best choice.