Dear Andreagiovanni Reina

I am a 3rd-year student at Computer Science Department. When I found this opportunity to directing swarm robots to perform art, I was so excited since it mentions 2 of my interests: programming and arts. And I believe that I can make a good contribution to this project.

The concept of swarm robot came into my mind last year in Bio-inspired computing and Robotics Course. We learned the way of how collective behaviour of social insect colonies works to achieve a goal and some algorithms associated with it. It was really amazing to see how those swarms act simultaneously to complete some tasks.

Algorithm is also one of my strength. Last year I won the 2nd place with £2000 award in a coding competition whose task was to write an algorithm to play the game named HiveMinder. The rules of the game and competition can be found on this page: https://www.ahl.com/coderprize. I had a great experience in designing algorithms. I believe this will be useful in designing the codes for those swarm robots.

My first time experience with a robot was at one of my Java assignment in the first year where I wrote some code for a Lego robot to do some tasks to simulate an ‘ant’. I also had the chance to program the Braitenberg Vehicle model with Lego robot in another activity, and I was having a great time in solving the problems while dealing with noisy input data.

Software Hut was one of my course where I worked on Linux to write a software system in a team. Our project was to program a Liquid Democracy voting system. In this project, I found Linux is really a good tool for programmers to manage and share files with a team using git.

In last summer, I self-taught C++ programming by watching videos from ChiliTomatoNoodle who is professional in C++ and has very cool style in his videos. His channel can be found in this link: https://www.youtube.com/user/ChiliTomatoNoodle. I really enjoyed his videos and his style to explain the terminologies and I had learned a lot from his videos. Outside the class, I also did some exercise on HackerRank with C++. Now I have a good understanding of C++ programming language including how the pointer works.

Speaking about Arts, it is always the way that I show my creativity and share ideas with other people visually, thus it has become one of my interest. Although I am not an artist, I often do some painting when I have inspirations. There are some paintings from me which are stuck in the email with my nickname: Rick. Those paintings could give you some clue about my level of Arts, where the pumpkin was the work that I did in the Art Society last year.

I believe that I have met the requirements and I hope you can give me this opportunity. The only question I would like to ask is what will be the schedule of this placement. I look forward to hearing from you.

Sincerely

Junjin Chen