

I feel any past triumphs do not shape a better suited candidate. Experiences only shape our lives once in a while. What we take away from those experiences is a whole other story. The reason I'm considering graduate school is because it is, and will always be, a dream of mine to be an academic.

Delving, now, into my thought structure that inspires my interest in Computer Science.

I value intuition over a mathematical or logical approach. Although there is not yet a clear definition of intuition available, I call the 'revelation' intuition, rather than 'getting used to a subject so much that you develop an 'intuition' of it'. This other kind of intuition I value just as much, though. These two meet at some point and I can't say where. It is one of my foremost goals in life to understand all things that interest me on the most fundamental level and get a sense of how they work. A sense which methodical approach cannot teach us, but one that is like intuition, a revelation, just plain, simple understanding. The topic that fits this structure, like two adjacent pieces of a puzzle, is Computer Science. It is mathematical and logical but if one develops an intuition for this subject, they can do wonders. Imagine a programmer having an intuition of how a problem could be solved, or a theoretical computer scientist having an intuition of how a formula could be proved, it will just be a matter of time that they would be able to bring their thoughts into a functioning code or a valid proof. As mentioned earlier, I believe, that mastering the intuition of a subject require strong fundamentals. I want to pursue masters in computer science for this very purpose, to develop an intuition for this subject and thus help contribute to its research and development.

My bachelors curriculum was my first experience with computer science, I do not believe in the concept of 'love on first sight' but I have to accept that this subject grasped my interest since the very first day. My academic career has been very challenging and rewarding, I have taken courses ranging from theoretical computer science such as formal languages and logic, computability and complexity and artificial intelligence to more practical courses such as programming in Java, databases and web applications, computer networks and operating systems. To develop my abstract thinking I also took a plethora of math courses. But it was not until I took my specialization course, computer graphics and visualization, that I realized what I really want to follow in the future and inspired me to choose my bachelors thesis topic.

I've bore through the tediousness of a fantastic level to get an opportunity to work on computer graphics. I have a firm understanding of the concepts of raster graphics, color models, shading algorithms and lighting models, textures, and interactive scientific visualization methods of volume data. Currently, I am writing my bachelors thesis on the topic 'Efficient collision detection in a scene with static and dynamic objects and its application to chewing simulation' under the super vision of Prof. Dr. Lars Linsen, the head of visualization and computer graphics lab at Jacobs University. I am working to calculate a distance field of the human teeth model which is pre processed and stored in the memory. This distance field is then used with a collision detection mechanism to provide a real time chewing simulation of the human teeth model and the gummy bear substrate. To achieve the rapid calculation of the distance field, I am using the

method proposed in a paper published by the computer graphics department of University of Bonn in their hair modeling project. I have also been through some of their other computer graphic projects and I have especially found the motion reconstruction, efficient rendering of landscapes and marker-less vision-based hand-tracking for interaction quite interesting. If given a chance, I would feel honored to contribute to these projects.

Computer science is one of those fields that affect the common man directly due to the increasing cheap access to the smart technology. Thus, the research and development in this field is not only essential but is required. To conclude, my reasons to apply for the masters in the computer science field come from my personal endeavor to develop very strong concepts for this field and to contribute my part today for a better world tomorrow.

I look forward to joining the computer science department and having a long and mutually profitable association with the University of Bonn.