Motivation Statement

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Why have you chosen this Master's programme, and why at Utrecht University?
For my bachelor in mathematics I followed a lot of theoretical courses. I noticed that these courses where mentally challenging, but in my perspective lacking in the amount of things you can do with it in the real world. The computing science courses on the other hand where less mentally challenging, but are more practically. In the sense that you can directly use what you learned in the real world. I originally was very confused at which master I should pick. If I would choose mathematics I would be mentally challenged, but I would get the feeling that what I was working on had no real point to it. If I would choose computer science what I learn will be more usefull, but as I thought back then less challenging. I talked with dr. Vákár about this. And he said that I could expect the master computing science to be more challenging than the bachelor. I therefore decided that it was the best choice to do a master degree in computer science. I chose Utrecht University simply because It is convenient for me to travel there. It is also where I followed by bachelor degree. I consider this to be all in all positive experience and would therefore not refrain from staying here for a longer time.

What is your experience/what demonstrates your interest in this field?
First of all, I followed a lot of computing science courses at Utrecht University. Of these courses I found the courses Languages and compilers and Functional programming most interesting. Here is a list the of all the computing science courses I have followed and completed:

Secondly, having done a bachelor degree in mathemathics will probably give me some insights that many other students will not have. For my thesis for example I had to understand a lot about cathegory theory. This turned out to be usefull to understand a language like Haskell, as the whole idea of Haskell is to be a language built around cathegory theory. Many concepts like monads and functors are much easier to understand now I know the full mathematical context. Less concretely, I also think that my bachelor degree has also given me a way of thinking that is very usefull. Being to reason formally about abstract concepts is something will certainly help me in computing science.

Finally, I also like to spend my free time on computer science. If I have enough time I like to be busy with writing games in openGL or write a compiler in Haskell or design a CPU Logisim. Although I find it a bit hard to find enough time for these kind of projects lately. It does show I have an interest in computing science that extends beyond my degree.

Which subject areas within this field do you find most interesting and why?
For my masters I have chosen the "Programming Technology track". This is because I found the subjects related to this track like functional programming and languages and compilers most mentally stimulating. I also felt that these courses where most similar to mathematics courses. I think I will really enjoy the course "Advanced functional programming". This is because I really enjoy everything related to functional programming and I am very excited to learn more about it.

I think the course "Program semantics and verification" will also be interesting as it will combine my interest in giving proofs within mathematics with my interest in functional programming.

What makes it evident that you possess the required qualities for this Master's programme? How does this Master's programme correspond with your career or research ambitions?

After this master degree I hope to become a software engineer. **Reflect on your academic achievements.**