

Rafael Castro Gonçalves Silva

Cover Letter

To whom it may concern,

Hi, I'm Rafael.

I'm a working computer scientist and a developer. I'll talk a bit about myself and why I'm interested in this position.

At the end of my CS undergrad I discovered that programs can be certified in respect to a specification using proofs. I already knew Curry-Howard correspondence, but when I found proof assistants like Coq and Isabelle, and languages with dependend types like Agda and Idris, I was very surprised to see what people were doing with it. For example, I found out CompCert, a C compiler with a fully verified backend. I started the masters and my advisor had experience with type systems for programming languages, specifically type inference algorithms. So I decided that my masters would be using a proof assistant and would have something related to type inference. You may find its resulting publication by searching "Monadic W in Coq".

After I finished my masters I was looking for a PhD, but things in my life took an unexpected turn, so I ended up working in the software industry as most do. I was lucky enough to find a very interesting project to be part of, being brief: it's a distributed system, processing an event stream, with concurrency scenarios that must process events in whatever order, so it can keep a materialized view correctly updated. So far this project showed the very complex world of distributed systems and stream processing.

When I saw this position description I thought it is a perfect match with my experiences, so decided to quickly write this small cover letter.

I hope I appeared interesting enough for future conversation.

Best regards, Rafael.