

## Cover letter

January 27, 2024

Dear Sir/Madam,

I am in my second year of my Master's degree in mathematics and I am researching quantum computational architectures with photonics. I want to apply for a SoftwareQ Quantum Software Engineer job. This opportunity is perfect for me, as I will be able to apply all the experience I've gained during my studies as well as gain new, important knowledge about the industry.

My research can support the fact that I am driven by quantum computations. I researched use cases for quantum algorithms; I researched the effect of noise on quantum algorithms; I researched quantum entangling transformations with the KLM protocol. I believe in the advantage that quantum computers will bring. That is why I am sure that this opportunity will be a crucial step in my career.

I have an undergraduate degree in computer science and want to incorporate my programming skills into my work as much as possible. My recent project, "Strawberry Fields Composer" showed me the intricacies of encoding quantum light with nonlinear elements. I used several engines to simulate quantum systems and analyzed differences in these approaches. This experience will be useful for my work on any kind of quantum simulations software.

To sum up, I have no doubt that I will be a great fit for your team and I hope to be helpful in our future work!

Yours faithfully,

**Ivan Ogloblin**