

**HR Manager**  
*Lux Visual Effects*

January 8, 2017

Dear Sir or Madam,

I would like to submit my application for the Unity Developer position advertised.

I have steered my education and career in the path of gaining the most applicable skills possible precisely for a position such as this. I am familiar with both C# and Unity but have most of my graphics experience in C++ with OpenGL. I am a quick learner and believe I would make a strong candidate for this position.

I worked closely with Dr. Brian Wyvill whose research is focused on animation. We worked with C++, OpenGL 3, QT and the Boost library. Since he taught me the 12 principles of animation, I see their application vividly. To gain experience with their effect I made a quick animation about a toaster. Though it was short it was clear to me how their use can bring something so mundane as a toaster to life. It inspired me to do anything I could to make animation the focus of my career. C++ has always been my favorite programming language. Combining it with the pipeline power of OpenGL and the potential is incredible. Unlike most higher level languages I feel like I have a much better understanding of what the code is actually doing under the hood. It is the language I have had the most formal training with; I was instructed in modern techniques and coding practices during a multi-resolution signal processing class during my masters. This knowledge I have applied to each of my OpenGL projects. I made a basic first person shooter game which I called 'Zombie Hunt'. It involved basic animations using Blender, AI programming and game-engine mechanics.

During my studies with Dr. Wyvill I was introduced to more complex simulation techniques. Using Lagrangian mechanics, quaternions and spline paths I created a globular physics simulation. I imported a fountain object and had it spray out droplets of a liquid. These droplets were subject to attraction and repulsion forces. Tweaking the values could modify the behavior to look like water, putty, even powder. I have made videos demonstrating these projects, a URL to view them is available upon request.

I have excellent personal skills. I am an experienced team leader, a natural independent thinker, and a concise communicator. I believe that I will make a strong candidate for this position; I wish to help Lux Visual Effects create breathtaking virtual reality experiences. Thank you for your time and consideration.

Yours faithfully,

**Nick Houghton**

*Attached: curriculum vitae*

**Nick Houghton**

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