

HR Manager
CivicInfo BC
Victoria B.C.

April 18, 2016

Dear Sir or Madam,

I would like to submit my application for the Programmer / Developer position advertised on the *Viatec* job board.

I have steered my education in the path of gaining the most applicable skills possible precisely for a position such as this. Using the .NET framework, C#, Javascript and HTML I developed a website which hosts an on-line suite of tools for hardware developers to analyze security risks in their integrated circuits. The website uses the *Entity* framework to communicate with a remote database to store user, application and statistical data. This website is currently hosted on the *Azure Cloud System*. I am very proficient with C++. I used it to build a 'proof-of-concept' software implementation of a new homomorphic encryption scheme I helped develop with my research group. I have also used C++ in combination with OpenGL to develop animations to simulate real-world physical systems. Using *java* I developed a distributed system modeling an on-line stock exchange system. The project was focused on scalability; the end result was a an efficient, reliable system capable of processing upwards of thirty-thousand transactions per second. In my undergrad I completed two 'specializations'; *Embedded Platforms* and *Networking*. Using Kali Linux I have performed penetration testing and network defense on websites, servers and mobile devices. I am familiar with common Internet protocols such as IP, DHCP, IMAP, SMTP and more. I have also designed multiple integrated circuits using VHDL. I am also very familiar with tools such as *Git*, *L^AT_EX*, performance profilers, and integrated development environments such as visual studio and eclipse.

I received my bachelor's in engineering, majoring in computer engineering in April of 2015. The development of exceptional software, requires more than just the knowledge of what your code can accomplish. To truly excel a developer must understand what is happening 'under the hood' of their machine. I selected the computer engineering major because I wanted to not only gain the skills of a professional software engineer but to use my understanding of the hardware to stand out as a team member.

I am a skilled, hard-working developer with experience and knowledge I feel that I can bring to aid *CivicInfo BC* in providing premium service and satisfaction to its customers. I learned the value of a team dynamic while working as a lifeguard and aquatic supervisor during my undergrad. I believe that this experience, my skill set and my reliability would make me a valuable asset to the *CivicInfo BC* team.

Yours faithfully,

Nick Houghton

Attached: curriculum vitae

Nick Houghton

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Nicholas Houghton

Curriculum vitae

WORK EXPERIENCE

SEPTEMBER 2015 - DECEMBER 2015

University of Victoria - ECE Department

Teaching Assistant

CENG 255, Computer Architecture: Responsible for student learning in a hands on lab environment. Required to have intimate knowledge of the STM32 32-bit ARM MCU use in class as well as the Eclipse IDE, the C programming language and ARM assembly programming.

SEPTEMBER 2014 - MAY 2015

University of Victoria - ECE Department

Junior Research Assistant

Responsible for the software implementation of an experimental fully-homomorphic encryption algorithm using the C++ programming language and contributed to the algorithm design and conception. Responsible for testing management and execution on the *Westgrid-Research Computing* super computer servers. Designed and built a graphical user interface for an experimental run-time operating system using the Swing JFrame.

JANUARY 2012 - APRIL 2012

Applied Engineering Solutions

Co-op Employee

Responsible for the drafting and review plans for commercial construction projects via the AutoCAD design suite. Inspected post-construction sites to create accurate 'as-built' plans for archive storage.

MAY 2011 - AUGUST 2011

MMM Group - Vancouver B.C.

Co-op Employee

Assisted Senior Project Engineers and Project Managers design and execute designs of power distribution, lighting and emergency systems in large-scale construction projects. Responsible for product data research and client-manufacturer liaison. Performed on-site quality inspection. Designed an award calculator for LEED's mercury-content, 'green'-design award using Excel.

JANUARY 2014 - DECEMBER 2014

Saanich Commonwealth Place - Victoria B.C.

Aquatic Team Leader / Lifeguard

Responsible for the direct supervision and management of lifeguards and swim instructors. Responsible for facility and equipment management. Performed incident management, quality of first-aid assessment and supervision, emergency medical services communication. Responsible for facility inter-departmental co-operation and communication.

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EDUCATION

2015-2016 **Computer Engineer**

M.ASc

University of Victoria

2010-2015 **Computer Engineer**

B.Eng

University of Victoria

PROJECTS

2015 **Hardware Trojan System**
Web Dev - HTML, C#, CSS, JS

2015 **Zombiehunt - Video Game**
Software Development - C++, OpenGL

2015 **Day Trading - Distributed System**
Software Development - Java, XML

2015 **Homomorphic Encryption**
Software Implementation Engineer - C++.
OpenMP

2014 **CORDIC Processor**
Hardware Design - FPGA on VHDL

SKILLS

SOFTWARE C, C#, C++, Java, JavaScript, HTML, CSS, Linux, OpenGL, Git, VHDL, Animation, LaTeX

ACADEMIC Calculus, Discrete Math, Physics, Academic Writing, Research, Public Speaking

PERSONAL TopCoder Competitive Programming, First-Aid, Music

REFERENCES

DR. FAYEZ GEBALI Electrical and Computer Engineering Dept, Chair
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