Computer Engineer

NICK HOUGHTON

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Skills

PROGRAMMING
C, C++, Java, Python, HTML, CSS, MATLAB, VHDL

MATHEMATICS
Single and multi-variable calculus, differential equation, discreet mathematics

ENCRYPTION
Fully homomorphic encryption design

PROCESSOR DESIGN
VLSI processor design using VHDL, Application Specific Design

RESEARCH
Independently provides timely and actionable findings, thorough documentation, strong written and verbal communication of findings.

FIRST AID
CPR, spinal injury management, incident management, patient care

Academic Experience and Projects

EPASP: EMBEDDED PLATFORM FOR AUDIO SIGNAL PROCESSING

CENG 499: University of Victoria 2014

- Specification and Schematic Design.
- Processor selection and passive circuitry design.
- Printed circuit board layout design using *Altium*.
- Technical report writing and design documentation.

CORDIC PROCESSOR: APPLICATION SPECIFIC PROCESSOR DESIGN

CENG 441: University of Victoria 2014

- Use of VHSIC Hardware Description Language.
- Processor architecture design.
- Use of Xilinx hardware design suite.
- Technical report writing and design documentation.

DAY-TRADING: END-TO-END DAY TRADING SYSTEM

SENG 462: University of Victoria 2015

- Design and development of client-use web page
- Design of web server, transaction server. Interaction with third-party stock quote server
- Database design and management.
- Software scaling.
- Technical report writing and design documentation.

Work Experience

JUNIOR RESEARCH ASSISTANT - University of Victoria- Victoria B.C. - September 2014 - Present

- Responsible for software implementation of experimental fully-homomorphic encryption algorithm.
- Contributed to algorithm design and conception.
- 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.

CO-OP EMPLOYEE - Applied Engineering Solutions - Victoria, B.C. - January - April 2012

- 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.

CO-OP EMPLOYEE - MMM Group - Vancouver, B.C. - May - August 2011

- Assisted Senior Project Engineers and Project Managers design and execute designs of power distribution, lighting and emergency systems in large-scale construction projects.
- Product data research, client-manufacturer liaison.
- On-site quality inspection.

- Designed an award calculator for *LEED*'s mercury-content, 'green'-design award using Excel.

AQUATIC TEAM LEADER – Saanich Commonwealth Place - Victoria B.C. - January – December 2014

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

LIFEGUARD – Saanich Commonwealth Place - Victoria B.C. - April 2006 – December 2014

- Responsible for pro-active accident prevention and supervision of patrons.
- Use of surveillance techniques.
- First-aid knowledge and application.
- Incident management, public-relations and communication skills.

Education

MASTERS OF APPLIED SCIENCE - University of Victoria - Victoria B.C. - May 2015 - Current

- Supervisor: Dr. Fayez Gebali

BACHELORS IN ENGINEERING - University of Victoria - Victoria B.C. - April 2015

- Major: Computer Engineering
- Specialization: Digital and Embedded Platforms.
- Specialization: Networks Security and Privacy

STANDARD FIRST AID - Red Cross - Victoria B.C. - December 2015

CPR-C - Red Cross - Victoria B.C. - December 2015

References

Dr. Fayez Gebali, PhD, PEng
Electrical and Computer Engineering Dept, Chair
University of Victoria
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Phone: 250 721 6036

Anca E. Cojocaru, P.Eng., LEED AP
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