Philip Mark

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Education

2007 - (2011) **B.Eng., Computer Engineering**. McGill University, Montreal. (CGPA: 3.74/4.0)

Research Experience

Summer 2011 **NSERC Undergraduate Summer Research Award ($5,625)**

- Project: Network Measurement and Anomaly Detection (Prof. Michael Rabbat – McGill University) **[Poster presentation]**

Publications

Yao, Z., **Mark P.**, Rabbat M., "Anomaly Detection using Proximity Graph and PageRank Algorithm", IEEE Transactions on Information Forensics and Security, Submitted Sept 2011, In Peer Review.

Employment Experience

Winter 2011 **Research In Motion**. Cellular Stack Software Developer COOP.

- Develop new features in C/C++ for the L1 control layer of the LTE/4G protocol stack as part of the GPRS Access Stratum team (RIM Cellular Technologies group)

Fall 2010 **McGill University**. Grader for the course *Introduction to Computer Engineering*.

- Assist professor in grading undergraduate students' assignments and examination materials

Summer 2010 **Research In Motion**. Driver Software Developer COOP.

- Develop C/C++ USB driver code and desktop tools for the USB team (Operating Systems group)
- Assist in testing, debugging and solving USB issues.

May 2009 & Summer 2008 **Volt Management Consulting**. Software Tester.

- Tested quality, compatibility, and compliance of software using DevTrack and DevTest, while working closely with the development team.

Computer Knowledge and Skills

Languages: C/C++, Java, Matlab, VHDL (Altera Quartus), ARM Assembly, MIPS Assembly, XHTML/CSS, Visual Basic

Graphics: Adobe Photoshop, Adobe Flash, Adobe Dreamweaver, Adobe Premiere, Softimage|XSI

Others: Visual Studios, Microsoft Office, OpenOffice.org, Perforce, PSPICE, LogicWorks, Maple IDE: NetBeans, Eclipse, Notepad++, CMS: MODx, Wordpress

Volunteering and Extra-Curricular Activities

2009 – 2011 **Technophilic Magazine:** Web designer and contributor for the undergraduate student technology magazine at McGill University. **[http://technophilic.mcgilleus.ca]**

2009 - 2010 **End Poverty Now:** Web designer/administrator for the non-profit End Poverty Now organization. **[http://www.endpovertynow.ca]**

November 2011

Projects (Academic)

Artificial Neural Networks and Vision: More than Meets the Eye *(ECSE 474/475 – Design Project 1 & 2)* develop an artificial neural network in software that simulates an ant's eyes image processing capabilities using C++ (team project)

- Developed part of the Neural Network class.
- Developed the command line interface and many other helper functions.
- Received a grade letter of A for the project.

Wireless Connectivity and WAP Localization (*ECSE 414 – Introduction to Telecommunications*): network measurements project to map out network characteristics on Google Maps (team project). **[link]**

- Coded a Java parser to merge and read log files.
- Used network measurement tools: InSSIDer, NetStumbler to gather data.
- Received a grade letter of A for the project.

Book2face.com (*ECSE 321 – Introduction to Software Engineering*): a social networking tool for sharing, buying and selling books online developed from scratch (team project).

- Designed and developed the template object for the website.
- Worked with team members to develop thorough systems testing documentations.
- Received a grade letter of A for the project.

ECSE 211 Design Project (*ECSE 211 – Design Principles and Methods*): design and code 2 robots using LEGO NXT Mindstorms kits to accomplish specific tasks together (team project).

- Designed the system model/architecture and systems algorithms as the lead Software Architect.
- Assigned various tasks to team members and assisted them to successfully develop working code.
- Received a grade letter of A for the project.

Projects (Non-academic)

Android development: develop an Android application to control and interface with the NXT Mindstorms brick through Bluetooth (in development).

PhilipMark.net: personal website. **[http://www.philipmark.net]**

LEGO NXT Mindstorms: design and build various forms of robots using a LEGO NXT Mindstorms kit.

Languages

English, French, Cantonese

Hobbies and Interests

Enjoy playing hockey, badminton, tennis, learning about computers and web designing.

References

Available upon request.