Sander Demeester

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1990/01/17

Personal

I'm Diagnosed with autism, Because of this, my academic career is somewhat unconventional. My big passions are information networks and number theory.

Work experience

Software developer   Summer intern 2013
Developing of a Python program to analyze large amount of logging information generated by the Ugent supercomputer through static data analysis and machine learning algorithms. At High performance and computing infrastructure (University Ghent).
(github.com/hpcugent)

administrative and ICT employee   2010 - 2011
Stage at Province of West Flanders department ICR.
In my final year of secondary education I started doing some administrative. This work quickly evolved to ICT work. At the end of the year the result was a security model i had developed involving the WiFi Security specification (802.11i)

Education

Secondary education, Extraordinary education for people with autism.
Spermalie BRUGES (2002 - 2010)

Informatics, **Ghent University.**
Courses passed:

1st bachelor (2010-2011)	Programming 1 and 2
	Communication Skills
	Intellectual property law
	Linux Computing (advanced)
	Scripting Languages (advanced use of Linux)
1st, 2nd and 3rd bachelor (2010-2013)	Algorithms and Data Structures
2nd bachelor (2011-2012)	Software Development 1 and 2
	Computer Architecture
3rd bachelor (2011-2012)	Operating Systems
	Computer Networking
	Interdisciplinary Project
	Internet technology
1st master (2012-2013)	Information Security and Cryptography
	Study of programming languages and models

Language knowledge	Dutch (Native speaker) English (Fluent reading, writing and speaking)

Education related projects.

Algorithms & Data Structures: AD3zip, ZW-tree
Own implementation of data compression algorithms.
- Burrows Wheeler
- lz77
- Huffman

Avank-bebras: Interdisciplinary Project
System administrator & Software developer.
http://github.com/SanderDemeester/bebras-avank.

Project information security: Designing and implementing of an online banking application using a multi-factor authentication scheme on Android (HOTP).

Personal projects

Design, configuration and management of an advanced home network
I have built and now maintain an IPv6 home network by running OpenBSD on embedded platforms: Alix 2D2 (AMD Geode, x86) and raspberry PI (ARMv6). Building compute cluster with raspberry PI.

Author of several open source projects.
Refer to github.com/SanderDemeester
- Network analysis tools
- Own implementation of cryptographic algorithms (with the purpose of gaining a better understanding of their inner workings).

ZeusWPI
Active member of ZeusWPI, a student organization at Ghent University with a passion for IT projects.
- http://zeus.ugent.be
- http://github.com/ZeusWPI

Ethical Hacking Workgroup
Active member of the Ethical Hacking Workgroup at the ELIS department of Ghent University, a faculty-organized initiative striving to teach interested students about IT security.

Attend IT-related conferences & events
- FOSDEM - Free and Open Source Developers, European Meeting (2007-2013)
- BruCON - annual security and hacker conference (2012)
- VPW - Flemish programming contest (2011-2013)
- Blackberry developer conference (2012)

SHA3 workshop
Cryptography workshop about SHA3 and permutation based cryptography, organized by VUB.

Reading international academic publications from IEEE and ACM.

Computer literacy

Programming languages

- Java (Excellent)

- C / C++ (Good)

- Python (Good)

- Javascript (Good)

- .NET

    ASP.NET

- x86 assembler en ARM assembly (Good)

- Scripting

    Bash, Sed en awk.

    Powershell.

Frameworks en Library

- libxml2

- ncurses

- Play framework

- Android (basic)

- Sage Mathematics

- scikit-learn

- JDBC

- jbox2d

- Swing

- sigma.js

- node.js

System administrator

- Linux en OpenBSD

    DNS/BIND (dnssec)

    advanced knowledge of TCP/IP and networking techniques.

    Good knowledge of IPv6 + deploy techniques.

    Knowledge VPN technologies. (TLS/IPSEC)

    Routing and dispatching algorithms (RIPv2, BGP basic).

    Excellent knowledge of the two biggest firewall based rule engines (IPTables and PF).

    Experience with NetFlow packet analysis.

    Experience with Apache.

    Experience with OpenSSL.

    Network Engineering.

    Network Architecture.

- Experience with Windows, Linux (Debian based, Gentoo, CentOS en Back-Track) and OpenBSD.

    Scripting, bash, sed en awk.

Tools

- Wireshark

- Postgresql

- MySQL

- NoSQL

- Graylog2

- Logstash

- Jenkins

- ZAP

- Eclipse

Varia

- Blog (http://www.sanderdemeester.be/blog)
- Interst in semantic web en Linked Data
- Continuous integration.
- OWASP
- Version control
     git
     basic knowledge SVN
     basic knowledge Mercurial SCM.
- Basic knowledge databank normalization

References

Luis Fernando Munoz   *HPC Systems engineer at Ghent University*
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Jens Timmerman   *System Engineer HPC at Ghent University*
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Kenneth Hoste   *HPC system administrator at Ghent University*
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Jeroen De Wachter   *IT Consultant at Addestino*
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