

STUART MACDONALD

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PROFILE

Ambitious software developer comfortable with a wide range of technologies. Highly motivated with an enthusiastic attitude and a passion for challenges. Always determined to achieve the best possible results through thorough analysis and robust solutions. Good personal administration and strong team leadership skills. Genuine interest in technical development outside of work hours with projects including a quadcopter, home automation and websites.



PROGRAMMING SKILLS

C / C++ / C#	Professionally 8 years, university and home projects 10 years (Including JNI). Written device drivers for ISDB-T, FM Radio chip and PIC programming interface. C# for Unity3D projects.
Scripting	Ruby, Python, Bash and Perl.
Web	Ruby on Rails, HTTP, CSS, jQuery.
Java	Android projects, both at work and at home.
Assembler	AVR, ARM, MIPS, Motorola, x86, PowerPC.
Frameworks/ Tools	QT, Jenkins, Gerrit, Git

PROFESSIONAL EXPERIENCE

June 2011 - current
Sony Mobile, Lund, Sweden

Senior Engineer (consultant and employee). As the senior engineer in the Security Verification Team, I work with a large variety of tasks:

- I have developed a custom test automation framework to enable more in depth automation of tests, and designed the automated test 'rig'. (used Ruby, Bash, and Jenkins)
- I have contributed to the Android Open Source Project a patch to extend the depth of their NIST Public Key Infrastructure testing.
- Topics that I have examined are NFC, PKI, certificate pinning, SIM card security, Security Enhanced Linux and Android APK corruption.
- I have designed a custom system comprising customized plugins to a commercial fuzz tool, allowing me to fuzz the Android platform on application, system or network level.
- Test automation using an company wide python library and programmed a manual interface with the GUI in QT.
- Examine system vulnerabilities, design solutions, implement fixes and created tests to guard against regressions.
- I also mentor and assist other team members with any technical challenges that they face.

[Mattias Göransson](#), former Manager:

"Stuart is one of the key resources which the security verification team at Sony Mobile is built around. His skill set, personality and great results are vital for the success for this team."

March 2008 - April 2011
ST-Ericsson AB, Lund,
Sweden

Development Engineer. At ST-Ericsson, I worked predominantly in the Security and Streaming media areas. This involved writing Linux drivers for an FM radio chip and an ISDB-T chip. I was technically responsible for Digital Rights Management within the ST-Ericsson mobile platform. I also had the opportunity to use my interpersonal skills while performing on-site customer support for ST-Ericsson, in both USA and India for LG and Samsung respectively.

Aug 2003 - Sept 2007
Australian Defence Force, 2nd Cavalry Regiment,
Darwin, Australia

Army Officer. I joined the Australian Defence Force in 2003 as part of their undergraduate recruitment scheme. In 2006, I started full-time work with the 2nd Cavalry Regiment located in Darwin, Northern Territory. I led and managed the workshop troop of thirty tradesmen and organized maintenance schedules.

EDUCATION

Completed 2005 at Monash University - Clayton,
Melbourne, Australia

Bachelor of Engineering (Electrical and Computer Systems)

Awarded 1st prize for outstanding presentation of final year thesis 'Visual Electronic Camouflage System', which used image processing and pattern recognition to create active camouflages.

Completed 2005 at Monash University - Clayton,
Melbourne, Australia

Bachelor of Science (Computer Science) (Honours)

Extensive use of C/C++. Focused on AI, Software Development Techniques and User Interface Design. My final year project used neural networks to make a spam email filter.

Expected completion 2018 at Deakin University,
Melbourne, Australia

Bachelor of Laws

Minimal workload - subjects completed include Contract, Torts, Property, Criminal and Commercial Law.

HOBBIES AND INTERESTS

Traveling – Australian Rules Football – Beercraft.

REFERENCES

Available upon request.