Elsabé Ros | Curriculum Vitae

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Experience

Discovery Holdings

Senior Solutions Architect (Mobile and VA)　　　　　　　　　*Jan 2023–Current*

Solution design for projects related to the mobile application ecosystem and the Discovery Virtual Assistant, investigating new tech, improve development process.

Discovery Holdings

Solutions Architect (Mobile)　　　　　　　　　　　*May 2020–Jan 2023*

Solution design involving mobile applications, investigating new tech, improve development process, mobile application and microservice development.

Acting Mobile Architect　　　　　　　　　　　　*Jan 2019–Apr 2020*

Solution design involving mobile applications, investigating new tech, improve development process, mobile application and microservice development.

Senior Developer　　　　　　　　　　　　　　*Jul 2018–Dec 2018*

Android development (Java, Kotlin), microservice development (Spring framework), solution design, improve development process.

Dariel

Senior Software Developer　　　　　　　　　　　　　*2017–2018*

ABSA - IRIS (*Jun 2018*)
B2B (Spring)

ABSA - PDLC (*Oct 2017-May 2018*)
Web development (Spring and Angular), Atlassian APIs

Dariel Graduate Application (*Apr 2018-Jun 2018*)
Progressive Web app (Polymer), Firebase

Entelect

Senior Software Engineer　　　　　　　　　　　　　*2015–2017*

Software Engineer　　　　　　　　　　　　　　　*2013–2015*

Discovery Mobile application (*2015-2017*)
Android development (Java), Backend development (Spring)

DPM/AIA Mobile application (*2013-2015*)
Android development (Java)

Vitality Service Portal (*2013*)
Web development (Spring)

University of Pretoria
Tutor *2012*

University of Pretoria
Teaching Assisstant *2011*

Formal Education

University of Pretoria
MSc Computer Science, *2016–2018*
Research: Digital Forensic Readiness in Mobile Device Management Systems

University of Pretoria
BSc (Hons) Computer Science, *2013–2014*
Research: An information-gathering botnet for private cloud environments

University of Pretoria
BIS: Multimedia, Cum Laude *2010–2012*

Certifications

Certified Spring Professional
Pivotal, *November 2016*

Courses

Hardware Security
Coursera, Verified Certificate *May 2015*

Cryptography
Coursera, Verified Certificate *April 2015*

Software Security
Coursera, Verified Certificate *April 2015*

Usable Security
Coursera, Verified Certificate *March 2015*

Languages

English: Professional
Afrikaans: Home language

Publications

Elsabe Ros. Digital forensic readiness in mobile device management systems. Master's thesis, University of Pretoria, South Africa, 2019.

Masters thesis

Title: *Digital Forensic Readiness in Mobile Device Management Systems*

Supervisor: Professor HS Venter

Description: Mobile devices have become very popular, and virtually everyone owns a smart device. As more employees became owners of smart devices, the organisations were put under pressure to allow employees to use their smart devices for work purposes, or alternatively provide employees with smart devices.

Most organisations opted for a Bring Your Own Device policy, where employees use their own smart devices for work purposes, with the organisation reimbursing some of the costs. Adopting such a policy introduced risks into the organisations, since the organisations do not own and do not have direct control over employees' personal devices.

One of the most widely used solutions to this problem is Mobile Device Management (MDM) software, which is installed on employees' devices and prevent them from taking actions that may be harmful to the organisation.

This leads us to the problem statement of this research. Since MDM systems are purely preventative and devices are not owned by the organisation, it is expensive and sometimes impossible for organisations to retrieve potential evidence from the devices when an incident occurs.

This research proposes a model to solve this problem by introducing a digital forensic readiness component into an MDM system. Adding digital forensic readiness to an existing MDM solution reduces costs by collecting evidence when suspicious activity is detected, reducing investigation times and legal costs involved in collecting evidence.

A prototype was created to show that the proposed model could be implemented in practice. The prototype shows how this solution can be utilised to collect data from devices and utilise it in an investigation.

Finally, the research and prototype are critically evaluated, and the benefits and shortcomings of such a solution are presented. The author also addresses privacy concerns arising from the data collection component.