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# Dale Nunns

## Senior Software Developer

Cape Town, South Africa

Additional contact details available on request.

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LinkedIn Profile: <https://www.linkedin.com/in/dalenunns/>

I'm a polyglot programmer who has been professionally developing software since 2000.

I'm comfortable in multiple development environments and platforms and have worked on everything from large retail stock-take systems written in .NET to Linux kernel drivers and code running on 8-bit microcontrollers. I've run my own company, worked for others, lead teams of developers and successfully delivered over 24 large projects used by 10000's of users around the world everyday.

With a preference for working in Microsoft .NET and C#, but will gladly use whichever technologies the job or project may require.

## SKILLS

.NET / C# / Python / AWS / Lambda / Redshift / Java (Android and Desktop) / Xamarin / MS SQL / PostgreSQL / SQLite / Typescript / Javascript / Angular / C/C++ / Linux / Windows

## ACHIEVEMENTS

### Badge

#### **BSides Cape Town 2017 - Flux-Capacitor Badge Firmware**

Wrote a BASIC interpreter that runs on the badge and allows you to write your own code to control the LED's. More details at <https://github.com/dalenunns/BsidesBASIC-2017>

### Talks

#### **Chip 'n' Dale 2.0 - Feature Creep Edition - An adventure in writing an emulator in .NET Core. (with a little Skia# and lots of GTK#)**

Talk given at [Cape Town Microsoft Developer User Group - @CPTMSDUG](#) (23/10/2019) in Cape Town on emulators and writing a CHIP8 emulator in .NET Core. More details at <https://xor.co.za/talks/chip8ndale2/>

#### **Chip 'n' Dale - An adventure in writing an emulator in .NET Core**

Talk given at [DeveloperUG](#) (24/06/2019) in Cape Town on emulators and writing a CHIP8 emulator in .NET Core. More details at <https://xor.co.za/talks/chip8ndale/>

#### **Shall We Play A Game? - Hacking and weaponizing a NES Classic**

Talk given at BSides Cape Town 2018 with Ross Simpson on hacking and weaponizing a Nintendo SNES Classic games console. More details at [https://xor.co.za/talks/shall\\_we\\_play/](https://xor.co.za/talks/shall_we_play/)

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### **Let's Talk Implants - *When size matters***

Lightning Talk given at BSides Cape Town 2018 on hardware implants, related to the Bloomberg story that had made headlines just before BSides Cape Town. More details at <https://xor.co.za/talks/implants/>

### **PEEK'ing and POKE'ing Memory - *Hacking a ZX Spectrum***

Talk given at BSides Cape Town 2017 on hacking a ZX Spectrum and looking at ways to expand the computer via the external bus. More details at [https://xor.co.za/talks/zx\\_spectrum/](https://xor.co.za/talks/zx_spectrum/)

## **EXPERIENCE**

### **Structure IT, Capetown - *Senior Software Developer***

August 2019 - Present

Part of the team building a high performance, big data, analytics tool for mortgage capital markets. Designing and implementing high-performance, massively parallel data processing systems.

Technologies used included .NET / C# / AWS / Redshift / Angular / Typescript / Docker

### **Psionet (Pty) Ltd, Capetown - *Senior Software Developer***

July 2010 - July 2019

I was a client facing solutions developer responsible for the design, development and implementation of bespoke software solutions with a focus on custom integration.

We build desktop, mobile and web-based software in a multitude of languages and development environments that integrate with our customers backend systems and run on Windows CE and Android based mobile devices.

Technologies used included .NET / C# / Microsoft SQL / SQLite / ASP.NET / Javascript / Docker / Windows CE / Linux / Windows / Java / Android / Xamarin

### **Kaplan & Hull, Capetown - *Solutions Architect / Analyst / Developer / ERP Consultant***

August 2008 - July 2010

I was responsible for the entire process of delivering bespoke software solutions to our clients.

Starting with initial analysis of the customer requirements, quoting on work, developing the software, consulting on any required changes to the ERP system, final implementation and user training and support.

Technologies used included .NET / C# / Microsoft SQL / ASP.NET / Crystal Reports / Syspro e.net / Excel (and VBA) / XML & XSLT

### **ProActive Integrators (Pty) Ltd, Capetown - *Solutions Architect / Developer / Team Lead***

January 2005 - August 2008

I was a client facing solutions developer responsible for the design, development and implementation of bespoke software solutions that tightly integrated with Syspro ERP and other

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existing business systems.

My role within the company varied depending on the project but often included leading a teams of 2-5 developers to build software solutions within very short timelines and tight budgets and working with the team of ERP consultants during the design and implementation phases of the projects.

Technologies used included .NET / C# / Microsoft SQL / ASP.NET / Crystal Reports / Syspro e.net / Excel (and VBA) / XML & XSLT

### **Iridium Software (Pty) Ltd, George** - *Co-founder / Technical Director*

November 2003 - December 2004

Co-founded Iridium Software, where I was lead developer and chief architect of Freight Manager - a multi-user, cross platform application for the door to door courier industry.

Freight Manager was a Java based desktop application with a highly customised Java.Swing interface, postgresql backend and a server component to handle interclient communication.

### **Dale Computer Technology, George** - *Sole Proprietor*

January 1998 - November 2003

My small successful computer company offering hardware and software sales and support, network installations and maintenance, software development and Linux administration services.

As owner of the company I was responsible for all aspects of running a small computer business and supporting its clients.

## **PROJECTS**

A more detailed list of projects available on my LinkedIn profile <https://www.linkedin.com/in/dalenunns/>

### **Van Sales and Distribution** - *Psionet (Pty) Ltd*

The System consists of a interfacing web portal, restful APIs and an offline first mobile application. It provides all the key business features of a point of sales, delivery and distribution systems including customer, inventory, ordering and warehouse management, route sales management including printed invoices, credit notes, cash receipts, promotional deliveries, messaging and an extensive reporting suite.

The system interfaces with Sage Evolution Pastel on a near real time basis and serves a population of reps operating throughout South Africa

Technologies included C# ASP.NET & WebAPI, Javascript, Microsoft SQL Server, Sqlite and an Android application developed in Java.

### **Ackermans: Store Management System** - *Psionet (Pty) Ltd*

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Part of the team that designed, developed and managed a team that produced a custom software application providing store administration functionality to all Ackermans stores in Southern Africa.

System comprises:

Mobile application running on 2 varieties of enterprise mobile hardware supporting 3 models of bluetooth receipt printers.

PC management suite providing a managed integration layer into the Ackermans EVO point of sales system; as well as a custom communications protocol and an automated software update process for all devices.

Mobile system encapsulates the following functionality:

Goods/Stock management: including goods receiving, inter-branch transfers (to and from), transporter claims, hanger returns and parcel checking.

Pricing: including tabbing, shelf edge labelling, kimble printing and managing ad hoc and transactional price changing.

Lay-Bye management system: including creation, placement, tracking and stocktaking.

High value serialised goods (cellular, decoders, etc.) functionality: including acknowledgement, transfers, item level damage and claims tracking and returns on individual items.

Stocktaking functionality: including managed serialised stock counts and generic merchandise counts.

#### **Mobile stock replenishment and receipting system - ProActive Integrators (Pty) Ltd**

Designed and developed a mobile application running on .NET Compact Framework 1.1 for Symbol Enterprise mobile devices, that used a wireless network to talk to custom SOAP web-services integrated with Syspro.

The mobile application contained a stock receipting module that receipted new stock arriving at the goods receiving bay into Syspro and a picking module used to pick and issue goods to the production line to replenish KANBAN bins.

Additionally the solution included a custom desktop application to print specialised serial no labels on Zebra Z6M label printers for completed assemblies coming off the production line.

Technologies used: C#, .NET Compact Framework 1.1, .NET Framework 1.1, SQL CE, Microsoft SQL 2000, Syspro e.net solutions, .NET SOAP web services.

#### **WIP Materials Picking and Issue Application - ProActive Integrators (Pty) Ltd**

This application was developed for a large specialised electronics manufacturer.

Included software for a Windows CE based mobile device + bluetooth label printer which guided the picker through the process of picking parts required for a specified job in Syspro's WIP module. Printing barcoded labels for the picked items, including the items stockcode, descriptions, lot no, grn no and any warnings (lead free, static sensitive etc).

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A desktop version of the above mobile application was developed for short one of picking or where a mobile device was not practical.

Additionally the solution included a custom label printing application pulling the label information from Syspro and a custom report application using Microsoft Word's COM interface to print associated documentation for inspection during the stock receipting process.

Technologies used: C#, .NET Compact Framework 1.1, .NET Framework 1.1, Microsoft SQL 2000, Syspro e.net solutions, .NET Web services, Microsoft Word COM Interface.