David Dudson Software Developer

Available for hire from Cairns, Australia from 19th Feb 2018

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About Me

I am a cross-paradigm, performance driven, Software Developer who specializes in meta-programming. With a passion for learning new languages and paradigms I can adapt to any company and/or team. I am currently working on a language backend for Process Systems Enterprise in Java/Scala, as well as working in the scalameta ecosystem in my own time for open source.

Professional Developement and OSS

Open Source

I have a passion for writing code, especially when it is consumed by a large number of users. I'm always looking for more ways to help out the open source community.

scalagen

Author

WIP code generation library for Scala.

scalameta

Maintainer

Meta-programming library for Scala.

scalameta paradise

Maintainer

Macro library for scala.

Elysium

Author

A collection of macros for scalameta/paradise.

Conferences

I try to attend as many conferences as I can. I enjoy networking and learning how the industry is evolving. I have been to multiple conferences including Kiwi Pycon, Kiwicon X and NZJSCon. I gave a lightning talk on GitPython at Kiwi Pycon, Dunedin. I will be attending Linux Conf Australia in January 2018.

Community

I attend as many talks and events as possible, via Massey University, IT Professionals of New Zealand (ITPNZ) or the Palmerston North Software Development Meetup Group. I will be joining IT Professionals Australia once I have arrived in Cairns. I have also given a talk and workshop for Scala to around 30 people at the meetup group.

Career

Company: Electric Memory IT (EMIT)

Contracted To: Process Systems Enterprise (PSE)

Time Employed: ~2 years

Based in Palmerston North, New Zealand, Contracting out to Process Systems Enterprise, which is based in London.

I am working on the gPROMS family of integrated modelling environments (IME's), designed for various engineers who design incredibly complex systems. The kernel is written in C++ and Fortran, with the UI written in Java. gPROMS is primarily a procedural/declarative language that is used to run simulations/optimizations etc. Thus the IME's act much like an IDE would for a Software Developer.

Projects:

New Language Engine (NLE)

The purpose of this project was primarily to remove a large chunk of the remaining CORBA code in our codebase. Using Antlr4 as our parser and lexer, we managed to build a fast, efficient module.

Moving from Maven to Gradle

Our build system is rather complex, we have multiple "code generation" steps, multiple jvm languages being used, extra post-compile tasks (obfuscation and encryption) and multiple repositories. The build was designed to be modular via Gradle plugins.

Flowsheet Routing

Our users were generating models in other applications, with 2000+ models and connections between them. The routing took place on Swings GUI Thread (EDT) and thus blocked the user from working while it happened. For user generated projects this could happen on project load and trigger up to 8 hour GUI freezes. Of course this is not acceptable, I moved all routing off the EDT. The largest problem was undo. We had asynchronous edits that had to be managed within Swings very synchronous and sequential undo system.

Past

Dick Smith Electronics

Role: Salesman

Time Employed: 1 year

Countdown Supermarkets

Role: Butchers Assistant/Checkout Operator

Time Employed: 5 years

Paradise Valley Berry Farm

Role: Raspberry harvester

Time Employed: 1 summer

Education

Massey University

Qualification: Bachelor of Information Science. Computer Science Major

Status: Compulsories complete.

Started working fulltime before completion currently finishing electives via part time study.

Western Institute of Technology Taranaki (WITT)

Qualification: Diploma of Creative Technologies. Animation Major

Status: Incomplete

Although Animation was interesting, it quickly became tedious. I wanted more of a challenge

New Plymouth Boys' High School (NPBHS)

Qualification: NCEA lvl 3

Status: Complete

Technical

Operating System

I prefer Unix based systems for general development, usually one of NixOS, Ubuntu, Fedora or OSX.

Version Control

I exclusively use git for version control. I am very competent with git and have written a number of internal scripts for it.

IDE's and Editors

Intellij IDEA
   I use Intellij everyday for most development. For Java specifically I struggle to see a reason to use anything else.
Webstorm
   Go to for Web development, although I do not feel an IDE is anywhere near as useful for web dev as it is for Java dev, I occasionally use a text editor instead.
Atom
   My usual text editor, I use it quite a bit for web development aswell.
Gedit
   I use Gedit for Git related work. Atom starts too slow and I have not yet spent enough time with Vim to use that.

Profilers

Yourkit
   I would recommend Yourkit to anyone, Yourkit makes optimizing code a breeze.
VisualVM
   I stopped using VisualVM after we purchased Yourkit. Yourkit really is far superior here.

References

Please ask me for contact information of my references. I wish to not make it available publicly for privacy reasons. Also, when contacting my references, please take note of their timezones.

Duane Griffin

Relationship: Cofounder of Electric Memory IT

Location: Palmerston North, New Zealand

Timezone: New Zealand Standard Time (NZST - UTC+13)

Email: ???

Phone: ???

Duane is my current boss. He has worked for PSE for 14+ years. Currently heads on the NLE project. Ask Duane any technical questions about my Scala knowledge and/or involvement in NLE.

Luke Usherwood

Relationship: Cofounder of Electric Memory IT

Location: Hungary

Timezone: Central European Time (CET - UTC+1)

Email: ???

Phone: ???

Luke worked for a short time in New Zealand when I first started. He has since moved back to Hungary. Ask Luke any technical questions about the flowsheeting work I have done. He also has worked on NLE and I send a lot of code reviews his way.

Andrew Bevan

Relationship: Head of Software Development, Process Systems Enterprise

Location: London, England

Timezone: Greenwich Mean Time (GMT - UTC+0)

Email: ???

Phone: ???

Andrew is the Head of Software Development. If you wish to know any non-technical information about how I have worked with PSE and how well I work remotely, feel free to ask him.

Steven Carpenter

Relationship: Ex Manager of Dick Smith Palmerston North

Location: Palmerston North, New Zealand

Timezone: New Zealand Standard Time (NZST - UTC+13)

Email: ???

Phone: ???

Steven (Steve) was my boss at Dick Smith before I started working as a Software Developer. If you would like to know anything about my retail experience, including customer interactions, feel free to ask Steve.

Built in the open by David Dudson on Github