**Karl Hendrikse**

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[Phone number and address redacted from website to prevent spam; email me]

I take pride in producing high-quality, well-documented and maintainable code, quickly. I am ruthlessly logical. I pick up new skills readily, and am eager to expand my knowledge and work in a team of talented people to develop something cool. I have a particular personal interest in video game development, but I’m keen to take on anything as long as it’s interesting/innovative/entertaining/clever and poses a good challenge.

# Skills

* Pretty deep understanding of C++ (and STL) and Java
* Solid object-oriented design/architecture skills
* Efficient at designing and implementing efficient algorithms/data structures
* Talented at refactoring spaghetti (and I really enjoy it!)
* Good eye for detail; spotting potential problems before they occur
* UI – most experienced with Android, Win32 and rolling my own; some iOS and web
* Graphics – OpenGL and Direct3D (fixed-function and shaders), software rendering
* Audio – experience with popular APIs e.g. OpenAL, OpenSL ES, XAudio2

# Employment

**Google, Sydney (2013 Apr – 2016 Mar)**

* Senior Software Engineer (2015 Jun – 2016 Mar)
* Software Engineer (2013 Apr – 2015 May)

Google Maps for Android Wear (2014 Jul – 2016 Mar)

*(Smartwatch app to see and control navigation running via Google Maps on your phone, and a cut-down version of the Google Maps UI itself running on your watch)*

* Technical lead and first member of team, from conception to post-release.
* Mentored junior developers, reviewed code, triaged bugs, etc. as well as being the primary software engineer on the team.
* Main person responsible for all code architecture, from UI to integration with the Google Maps for Android build system, and directly implemented a lot of it too.
* Maps was by far the most sophisticated Android Wear app, so we were constantly pushing the boundaries of what the system could do and working closely with the Wear team to move those boundaries.

Google Maps for Android Auto (2013 Apr – 2014 Dec)

*(Google Maps running in a special headless mode on your phone, connected to your car’s head unit using the car’s display for touch input and video output)*

* Team member from conception to first release.
* Designed and implemented the UI framework to enable the off-screen car mode UI.
* Designed, negotiated with the Google Maps for Android team and implemented a large amount of the complex refactoring needed in Google Maps for Android to make car mode possible.
* Implemented a whole heap of the car mode UI and functionality itself.

**Navman Technology, Auckland (2009 Nov – 2013 Apr)**

* Software Development Team Lead (2011 Dec – 2013 Apr)
* Senior Software Engineer (2011 Oct – 2011 Dec)
* Software Engineer – Graphics (2009 Nov – 2011 Oct)

*(Navigation software for dedicated in-car devices (WinCE and Android) and smartphones (iOS and Android))*

“The graphics guy” (2009 Nov – 2013 Apr)

* Mostly solely responsible for the map rendering portion (~100k lines) of the company’s codebase throughout my time at Navman. Owned all feature development, architecture and maintenance for map display, supporting new platforms and projects from sites around the world.
* Moved entire rendering system from software to OpenGL (while maintaining software rendering for old WinCE devices with no GPU or FPU).
* Did a lot of performance profiling and optimisation, for example rewrote the 3D building rendering system to gain a 20x speedup.

Manager of a small team (four reports) (2011 Dec – 2013 Apr)

Technical lead for Navman/Magellan’s first Android phone app (2012 Nov – 2013 Apr)

# Education

**The University of Waikato, Hamilton (2006 – 2009)**

### Bachelor of Computing and Mathematical Sciences with Honours with First Class Honours

Major: Computer Science

The degree consisted of 28 papers; I got 26 A+s and 2 As. I won so many awards and scholarships from NCEA and from various sources during my study that I made a tidy profit from attending university.

# References

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