

Luke Cooper

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Objective

I am an experienced software developer with diverse industry exposure looking for my next programming challenge. I have over 15 years of professional experience spanning a variety of industries and technologies. I am motivated and self-sufficient, but can readily fit in to any team environment. Above all I have a passion for learning which has enabled me to excel in the many challenging roles I have held throughout my career.

My development experience ranges from 3D games and simulations, to highly scalable multi-tier web applications. I am most familiar with the three main C-like languages, C++, Java and C#, however my more recent projects have included TypeScript/JavaScript and Clojure. I also have experience with a variety of front-end and back-end web frameworks, ORMs, messaging, caching and templating systems.

I am looking for a role in which I can use my experience and passion for learning in order to solve interesting and challenging programming problems.

Technical Knowledge

Languages	C#, Java, TypeScript/JavaScript, Clojure, C++, C, SQL, Ruby, Python.
Frameworks/ APIs	Node.js, AngularJS, jQuery, Unity3D, Microsoft .Net, Ring/Compojure, Java SE, Java EE, Spring, Nintendo RVL SDK, Microsoft X360 XDK, SCEE SDK.
Platforms	Linux, Windows, Amazon Web Services, Sony PlayStation 2/3, Nintendo GameCube/Wii, Microsoft Xbox/Xbox 360.

Professional Experience

2015–Present	Bondi Labs · <i>Programmer/Lead Programmer</i> Kuube · kuube.bondilabs.com I lead a small team of programmers in developing the Kuube 3D Simulation Training platform used for training employees in Workplace Health and Safety and Biosecurity Inspection. Kuube uses immersive 3D graphics to train and assess users in the detection and remediation of workplace hazards and biosecurity/quarantine risks.
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I have been involved in all aspects of the development of the Unity3D application across the three supported platforms of PC, iOS and WebGL. These include rendering, movement, cameras, UI, system design, data design and the deployment pipeline.

I have also been the primary developer of the Kuube web platform, used to manage course curricula, customers, users, licenses, app versioning and reporting of user results. Kuube web is a Node.js/Express.js web server with an AngularJS/Bootstrap front-end, backed by MySQL, Redis and S3 data stores, deployed to AWS Elastic Beanstalk. I have been responsible for the schema design, system design, implementation, testing, maintenance and the deployment pipeline of the full stack of technologies behind the system.

Virtual Refractor · www.virtualrefractor.com

I was the sole developer responsible for implementing a 3D Virtual Refractor for the Brien Holden Vision Institute used to augment the training of optometry students in Australia and internationally. The Virtual Refractor features a fully interactable 3D refractor/phoropter modeled from a real-world device, along with photogrammetry-scanned 3D patients.

I worked closely with the client to design and build the Unity3D WebGL application, and integrated the assets produced by a talented 3D artist. I also created a supporting web application that manages users, courses, task assignments, LMS integration, user results, and hosts the WebGL application. The Virtual Refractor web application is a Ring/Compojure web server written in Clojure, backed by MySQL and Redis data stores, with a Bootstrap front-end templated with Enlive. I was responsible for the end-to-end design, implementation and deployment of the system to multiple live instances.

Bondi Labs

Additionally I am responsible for designing and maintaining build systems, development and deployment tools, and the cloud-based infrastructure backing for Bondi Labs' web applications, websites and other company services.

2011–2014

Flight Centre Software Services · *Senior Developer*

As part of the corporate travel team, I was responsible for the development and maintenance of a suite of corporate travel booking software used both internally at Flight Centre, and by over 2,500 companies throughout Australasia.

E3/Portal

These products were legacy Java enterprise web applications used for customer management, live travel booking, payments, itinerary services, reporting and messaging. They were J2EE applications running in WebLogic and Tomcat application servers, with JSP and raw HTML front ends, integrating with the Travelport Galileo TMS and a Sybase database fronted by JDBC.

In my role as a senior developer I worked to enhance the security and stability of the platforms, while adding new features and customisations to the existing offerings. In particular I was instrumental in the products achieving PCI/DSS compliance by identifying and remediating various security and data storage vulnerabilities across the platforms.

Chartergate

I took on the sole responsibility of the development of a Spring/Hibernate Java web application for corporate chartered travel booking. I worked end to end on the application from schema design through to the jQuery/JSP front end, ensuring that the product met and exceeded the expectations of our chartered travel clients.

2005–2011

THQ Studio Australia · Senior Programmer

I worked as part of a small team that developed a number of console games based on major licenses which sold millions of copies internationally. I have credited contributions on five published titles on the Sony PlayStation 2 and 3, Microsoft Xbox and Xbox 360, and the Nintendo GameCube and Wii.

I designed and implemented a wide variety of game systems including cameras, save/load, profiles, user interface, character movement, navigation, front end, sound, editor and a number of complete mini games.

I worked closely with in house clients to ensure that the delivered systems met with the stringent expectations required for publishing a successful title.

All development was with C++ using proprietary and off the shelf libraries, with some PC tools implemented using the .NET framework.

2003–2005

Oracle Corporation · Applications Engineer

I made critical repairs to a troubled offline sales application originally developed in Java and VB6. The primary focus of the work was ensuring that the Excel-based application synchronised in a secure and reliable manner with the Oracle Applications database.

I also made enhancements and provided technical customer support for a J2EE application that provided a desktop interface using Microsoft Excel to allow for mass data entry into Oracle Applications database tables.

Education

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| 2015 | Bachelor of Applied Science · QUT
Ecology Major, Environmental Science Second Major, Graduated with Honours |
| 2002 | Bachelor of Information Technology (Honours) · QUT
Graduated with First Class Honours, Awarded University Medal. |
| 2001 | Bachelor of Information Technology · QUT
Software Engineering Major, Graduated with Honours. |

Publications

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| 2003 | Brown, R., Pham, B., and Cooper, L. (2003). Visual attention-based polygon level of detail management. <i>GRAPHITE</i> , pages 55–62

Investigated a novel approach of using the theory of human visual attention to optimise polygon level of detail management in real-time 3D simulations. |
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Interests

Cycling, the environment and the natural world, functional programming, learning.

References

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| Flight Centre | Scott Laporte · Former Team Leader
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