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### ***Personal statement***

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I am a “generalizing specialist” that is a generalist that has deep expertise in a few areas. I have technical expertise in a object oriented analysis and design with deep programming knowledge in dynamically typed languages, in particular Smalltalk, Python and Javascript.

Agile and lightweight development processes are a particular interest but I have experinece with other software development approaches.

I actively seek to expand my skill set by setting a self learning agenda to maintain currency in technical areas. My recent agenda included Ajax technologies, in particular the Google Maps API in Javascript and Adobe Flex. A small application for triathlon courses has been developed as an overlay on Google maps

In my current learning agenda, I am investigating concurrent and distributed processing with the Erlang functional language. To learn about Erlang and functional programming, a small RESTful web application using Erlang's http server called Yaws has been developed for a client.

It is my view that knowledge and understanding of technologies is essential for effective design decisions, as after all, these decisions must be capable of implementation within the constraints of the language and software environment.

## **Recent Projects**

### ***Gradebook***

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**[www.csu.edu.au](http://www.csu.edu.au)**

Charles Sturt University(35,000 students) will use Gradebook to record and manage the marks and grades for the student cohort. Gradebook will be a tool within the Sakai learning management system, a J2EE based portal system.

Working with business analysts and enterprise architects, as a contract solutions architect, I created the software architecture for the system. This includes: UML2 class diagrams; package diagrams; component diagrams; and entity-relationship diagrams. The user interface was designed from usecase specifications, and usage patterns estimated and data storage and transfer rates calculated.

This work was incorporated into a request for quotation (RFQ) document used in a tender process with external development companies.

Completed under contract to CSU in July 2009.

### ***Online Assignment Submissions***

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**[www.csu.edu.au](http://www.csu.edu.au)**

As Solutions Architect with Charles Sturt University I created the design documents to extend their current system working with business analysts, developers and enterprise architects.

The technologies are a composite of the Sakai learning management system (Java J2EE portal), Oracle DBMS, and SQR.

Completed under contract to CSU by July 2009.

### ***Aussie Butt Cream***

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**[aussiebutcream.com](http://aussiebutcream.com)**

The promotion and sale of Aussie Butt Cream, a specialist anti-chafing cream used by cyclists, is supported by this website.

A complete service is provided including website design, implementation, and hosting.

Features a single page shopping cart that was custom developed using ajax technologies and server side RESTful calls to an Erlang based server application. The server communicates with a payment gateway.

Completed under contract with Aussie Butt Cream March 2009. Support services are provided.

### ***EnviroSMART Business***

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**[enviroSMARTbusiness.com.au](http://enviroSMARTbusiness.com.au)**

EnviroSMART Business enables small businesses to assess their environmental footprint using a structured questionnaire.

My main contribution was to design and implement a domain specific language (DSL) that describes the 20 questionnaires in the project. Using this meta object description an html form can be generated, data retrieved from or saved to a database and reports generated. The highly repetitive coding required to manipulate each domain object, form and report was reduced by a factor of 5.

The design draws upon classic design patterns from Gamma et al. including Composite, Visitor, and Strategy patterns. The implementation required an extension to the ActiveRecord pattern in the application framework to allow dynamic specification of the table structure. The system was developed in PHP5.2, MySql and the Prado application framework.

Completed in February 2009 under contract to Eternity Technologies.

### ***Start Your Business Here***

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**startyourbusinesshere.com.au**

Thirteen local government councils in the Riverina region of NSW required a "plugin" application for their websites that would enable the general public to determine the rules and regulations that must be met when starting a business in the region.

The challenge was to find a solution that could be used in the diverse web-server environments operated by councils. The solution was to construct a pure Javascript application that can access a description containing each council's specific questions and regulation information.

A Windows desktop application maintains the description loaded on each council site via an Ajax call to the server. Technologies used include javascript and Dolphin Smalltalk.

Completed in February 2008 under contract to Eternity Technologies.

### ***Councilshop***

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**temora.councilshop.com.au**

Temora Shire Council operate a web service in which customers can order and pay for certificates and other property information requests. Payment is made via a credit card payment gateway.

The major challenge was to link the certificate service to the council's property database so that users can verify property details such as Lot and Development Plan number. A second challenge was to develop a flexible system that with minor modifications can be implemented in other councils.

The system has been developed using Prado Php framework and MySql database. It was designed by me to take full advantage of the object oriented features in PHP to enable customization for additional councils without major changes to the application.

Completed in April 2009 under contract to Eternity Technologies.

## ***Riverina Business Clinic***

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**riverinabusinessclinic.com.au**

Riverina Business Clinic assists small businesses to recognise and consider the legal implications of their business practices. Each business person will be interviewed by a legal practitioner using a structured interview with data collected on a Nokia N800 handheld computer.

The hand-held device presents a structured questionnaire that is easy for the practitioner to navigate and record answers. The solution was developed using the Gnome Hildon project, GTK+ and Python. On device data storage uses the Sqlite dbms.

Completed under contract with Eternity Technologies in October 2008.

## ***GPA ACCREDITATION plus***

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**gpa.net.au**

The website for GPA ACCREDITATION plus provides information about the accreditation process for medical general practitioners.

This website features a custom content management solution that integrates Filemaker Pro databases used in the GPA back-office with the database used to supply content to the website. This solution allows GPA to retain their extensive Filemaker back-office solutions and have their information served on a high accessibility webserver. The site has been developed using Prado php framework and MySql databases and Filemaker Pro.

Completed under contract with Eternity Technologies in November 2008.

## ***AusVit Vineyard Management and Decision Support System***

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With the Co-operative Research Centre for Viticulture, I was the development manager for the AusVit vineyard management and decision support system that was distributed to 300 users. During my time with the project, I supervised a team of two programming staff and five consultants employed under contract.

The decision support system utilized biological and expert system models for pest and disease prediction. Developed using Borland Delphi and the Clips expert system shell, AusVit contains 62 tables, 33,000 lines Delphi, and 30,000 lines C++.

The expert system models required extensive development sessions involving many requirements elicitation sessions.

Completed under contract with the Cooperative Research Centre Viticulture over the period 1999 to 2004.

## Education

**Master of Information Technology.** Charles Sturt University.  
Completed in 2002

Major project: 'Clustering documents in dynamic document collections'. The system automatically groups similar documents in rapidly changing document collections. Typical collections would be the news stories from the last seven days written for a newspaper, or presented on a AAP newswire. The project was developed in Smalltalk using an object oriented design and implementation.

**Graduate Diploma of Computer Science,** University of Tasmania  
Completed 1986

**Graduate Diploma of Librarianship,** University of Tasmania  
Completed 1982.

**Bachelor of Science,** University of Tasmania  
Completed 1979, Double major in Physics.

## Technology

### ***Development Software***

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- Enterprise Architect UML modelling and design tool
- Visual Paradigm CASE tool
- Rational Rose CASE tool
- Squeak Seaside application server
- Javascript including Google Map, YAHOO and jQuery apis.
- Python and GTK user interface libraries.
- Nokia Maemo handheld environment.
- PHP4 & PHP5, Prado application development environment.
- Oracle 10i, Oracle SQL Developer
- MySQL RDBMS
- Cincom VisualWorks Smalltalk Version 7
- Object Arts Dolphin Smalltalk XP
- Java J2EE
- Java using Sun Forte and NetBeans
- Borland Delphi 4, dBase IV
- CLIPS expert system shell
- Oracle RDBMS
- Uniface ( a RDBMS independent application development tool)
- BASIS text retrieval system
- Hypercard on Apple Macintosh
- dBase III / Clipper
- 4th Dimension (a Macintosh database system)

## ***Development methods***

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- Rational Unified Process (RUP) & Unified Modeling Language (UML)
- Extreme Programming (and other lightweight and adaptive processes)
- Unit Testing (using Sunit, Junit, JsUnit test frameworks)

## ***Computer Hardware and Operating Systems***

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- MS Windows 95 / 98 / NT/ XP / Vista
- Unix on various platforms (Sun Solaris & Linux )
- IBM 3084 running MVS & TSO, ISPF, JCL, Clist
- Digital VAX / VMS

## **Employment History**

### **1995 to present      IT Consultant**

IT consultant in systems development maintained while employed as academic. Full-time as private consultant in 2008. Some projects have been documented in separate sections.

### **1991 to 2007      Lecturer, School of Computing and Mathematics Charles Sturt University Wagga Wagga, NSW 2650**

My particular teaching areas include : object-oriented systems analysis and design; database modelling and design; systems development processes; and object oriented programming using the Smalltalk and Java languages. Smalltalk has been used since 1992.

Enterprise design patterns was a recently developed subject taught to masters students.

### **1990 to 1991      Product Manager Records Management Systems Logical Technologies, Melbourne, Vic**

Logical Technologies is a software development house specialising in Unix and relational databases systems development.

### **1986 to 1989      Information Officer (Database Design) BHP Information Technology Group Melbourne Vic**

Perform systems analysis and design following a structured methodology, including system specifications, and data modelling.