
Trent H. Apted

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Career Objective

I seek to constantly challenge myself, and fill the world with Good Code.

Education

The University of Sydney

March 2005 — present

Doctor of Philosophy in Science/Engineering (Computer Science PhD Candidate)

Holder of Australian Postgraduate Award and Smart Internet Cooperative Research Centre scholarships

Feb 2000 — Nov 2003

Bachelor of Computer Science and Technology (Honours) (Advanced)

First Class Honours and the University Medal (conferred 30th April, 2004)

Final Mark: 92.0, Weighted Average Mark (WAM): 90.8* (*with 85 a high distinction*)

**the highest of any fourth-year student in the Faculty of Science that year*

Sydney Boys' High School

Feb 1994 — Nov 1999

Higher School Certificate, University Admissions Index (UAI): 98.55

Attained the honour roll for 3U Computer Studies, 2U Business Studies and 3U Mathematics

Experience

Smart Internet Technology CRC

PhD Candidate, Researcher and Software Developer

Mar 2005 — Jun 2008

Developing a large, highly responsive C++ software architecture for *tabletop* interaction, used by numerous other developers

National ICT Australia (NICTA)

Research Engineer, Networks and Pervasive Computing Program

Mar 2004 — Feb 2005

Conducting research and development for Project Nightingale

The University of Sydney

Honorary Associate, School of I.T.

Mar 2004 — Feb 2005

Conducting research on Project Nightingale

Academic staff member, School of I.T.

Mar 2003 — Jun 2007

Tutoring

3rd Year Software Project Course (2006)

1st Year Introductory Programming (Advanced Stream) (2003)

2nd Year C Programming (2003, 2005, 2006, 2007 and 2004 Summer School)

Research Assistant, School of I.T.

Jan 2003 — Feb 2003

Research and software development for ontology-based projects

Hoys Corporation (Eastgardens Cinema)

Crewmember Nov 1998 —

Projectionist Jul 2000 —

Duty Manager Mar 2002 — Feb 2004

Awards & Achievements

Received Australian Postgraduate Award scholarship	2005
Placed on Dean's list of Excellence in Academic Performance	2000, 2001, 2002
Admitted by the Dean to the Science Talented Student Program	2001, 2002
Placed on the School of IT High Honour Roll	2000, 2001, 2002
Awarded the Cisco Systems Prize for Computer Science (Networks & Distributed Systems)	2002
Awarded the Professor John Rosenberg Prize for Excellence in Computer Science	2002
Awarded the Avaya Labs Prize in Computer Science and Information Systems	2002
Inducted into Golden Key International Honour Society	2001
Awarded Prize Certificates (top 0.3%) in the Australian Schools Mathematics Competition	1996, 1998
High Distinctions (top 1%) in the Australian Schools Science Competition	1994 — 1999

Skills

- High proficiency in C++, C, Java, Shell Scripting and Python.
 - Particular speciality in highly concurrent (multi-threaded), portable and efficient object-oriented C++, incorporating cross-platform dynamic libraries and run-time loadable plugins, with build targets for Windows, OSX and Linux.
 - Over 100 000 lines C++ experience since 2003.
 - Includes experience with OpenGL, cryptography, user interfaces, novel (UbiComp) interfaces, networking/sockets (including Bluetooth and 802.11 on mobile devices), machine learning, XHTML, CSS, CGI, Python packaging tools and natural language processing.
 - In-depth knowledge of version control (Subversion, CVS), make, autotools (m4, libtool, autoconf, automake), cross-platform dynamic-link libraries (plugins), Trac (including administration and development of Trac plugins), and object-oriented programming techniques.
- Extensive experience in Windows and Unix/Linux/POSIX environments, including programming, software, hardware, servers and system administration in a group environment.
 - Includes experience configuring and maintaining Apache, MySQL, Squid, PostgreSQL, dm-RAID, dm-crypt, Samba and FTP as well as Linux accounts and package management.
- Proficiency with database design and SQL (Oracle, MySQL, PostgreSQL and Microsoft Jet/Access).
- Programming experience with Matlab, Visual Basic, VBA, Eiffel, Prolog, Haskell, Powerbuilder, Reduce and MIPS assembler.
- Experience with programming for embedded devices running Windows CE or Linux 'Familiar', as well as tablet/stylus and concurrent multi-user interfaces.
- Interpersonal and customer relations skills derived through working as a cinema supervisor/duty manager with Hoyts Cinemas.
- Full experience using Microsoft Office suite, Adobe Photoshop, Dimensions and Illustrator, and L^AT_EX.

Patents (as inventor)

- Trent Apted. An interface element for a computer interface (Black Hole). Australian Provisional Patent 2007904925, Smart Internet Technology CRC Pty Ltd, Sydney, NSW, Australia, September 11 2007a.
- Trent Apted. A system and method for manipulating digital images on a computer display (Flip). Australian Provisional Patent 2007904927, Smart Internet Technology CRC Pty Ltd, Sydney, NSW, Australia, September 11 2007b.
- Trent Apted. Systems and methods for remote file transfer (Remote Images). Australian Provisional Patent 2007904928, Smart Internet Technology CRC Pty Ltd, Sydney, NSW, Australia, September 11 2007c.
- Trent Apted. A system and method for capturing digital images (Capture Frame). Australian Provisional Patent 2007904929, Smart Internet Technology CRC Pty Ltd, Sydney, NSW, Australia, September 11 2007d.

Selected Refereed Publications

- [1] Trent Apted, Judy Kay, and Aaron Quigley. Tabletop sharing of digital photographs for the elderly. In *CHI'06: Proceedings of the SIGCHI conference on Human Factors in computing systems*, pages 781–790, Montréal, Québec, Canada, April 22–27 2006. ACM Press.
- [2] Trent Apted and Judy Kay. MECUREO ontology and modelling tools. *Special issue on Concepts and Ontologies in Web-Based Educational Systems of the International Journal of Continuing Engineering Education and Lifelong Learning*, 14(3):191–211, 2004.
- [3] Trent Apted and Judy Kay. PhoTable: Enhancing the social interaction around the sharing of digital photographs. In *Proceedings of Collocated Social Practices Surrounding Photos workshop in conjunction with CHI2008 Conference on Human Factors in Computing Systems*, Florence, Italy, April 5–10 2008.
- [4] Trent Apted, Judy Kay, and Mark Assad. Sharing digital media on collaborative tables and displays. In Kathy Ryall et al., editors, *Proceedings of The Spaces In-between: Seamful vs. Seamless Interactions (in conjunction with UbiComp 2005)*, Tokyo, Japan, September 11 2005.
- [5] David West, Trent Apted, and Aaron Quigley. A context inference and multi-modal approach to mobile information access. In Jörg Baus et al., editors, *Artificial Intelligence in Mobile Systems (AIMS2004)*, 6th International Conference on Ubiquitous Computing, pages 28–35, Nottingham, England, September 7–10 2004.
- [6] Aaron Quigley, David West, Trent Apted, and Björn Landfeldt. Invisible interfaces: From pen & paper to shared table interaction. In *Proceedings of the workshop on Invisible & Transparent Interfaces, Advanced Visual Interfaces*, pages 15–24, Gallipoli, Italy, May 25th 2004.
- [7] Trent Apted, Judy Kay, and Andrew Lum. Supporting metadata creation with an ontology built from an extensible dictionary. In *Proceedings of Adaptive Hypermedia and Adaptive Web-Based Systems: Third International Conference, AH 2004*, volume 3137 of LNCS, pages 4–13, Eindhoven, The Netherlands, August 23–26 2004.
- [8] Trent Apted, Judy Kay, Andrew Lum, and James Uther. Visualisation of ontological inferences for user control of personal web agents. In E. Banissi et al., editors, *Proceedings of 7th International Conference on Information Visualization (IV'03)*, pages 306–311, London, England, July 16–18 2003. IEEE Computer Society.
- [9] Trent Apted, Judy Kay, and Andrew Lum. Visualisation of learning ontologies. In *Proceedings of AIED Conference, 11th International Conference on Artificial Intelligence in Education*, pages 359–361. IOS Press, 2003.
- [10] Trent Apted and Judy Kay. Generating and comparing models within an ontology. In *Proceedings ADCS2002, Australian Document Computing Symposium*, pages 63–78, December 16th 2002.

Other Major Achievements and Activities

- Exhibitor (demonstrating own research work) at CeBit Australia for the Smart Internet Technology CRC (Sydney Convention and Exhibition Centre, 2004, 2005); Australian Technology Park (ATP) Open Day for the National ICT of Australia (ATP, 2004); and Science in the City for University of Sydney (the Australian Museum, 2005)
- Delegate at *CHI2006*, international Conference on Human Factors in Computing Systems, April 22–27, 2006, Montréal, Québec, Canada (to present [1]); and other major international conferences
- Demonstration of research work for the Hon. Daryl Williams, Australian Federal Minister for Communications, IT and the Arts, which he described as “miraculous” (at National ICT Australia, May 2004); and Senator Kate Lundy, Shadow Minister for the Arts, Sport and Information Technology (at University of Sydney, July 2004)
- Cast member of Nerds FC, 2006; reality TV production, SBS Independent and Grundy Television
- Avid Dragon Boat racing competitor

Referees

Associate Professor Judy Kay, University of Sydney
Dr. Aaron J. Quigley, College Lecturer, University College Dublin
Associate Professor Bob Kummerfeld, University of Sydney
Dr Irena Koprinska, Lecturer, University of Sydney

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