

Internet

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David Pritchard

Summary of Qualifications

- Expert knowledge of C++, twelve years experience
- Familiar with Matlab, Unix shell scripting, GNU toolchain, HTML+CSS, OpenGL, Windows API, much much more
- Studied graphics, computer vision, image / volume processing, computational geometry, image-based rendering, and animation
- Comfortable with the mathematics required for physics simulation, rendering or image processing
- Strong object-oriented design skills, including design patterns
- **In short:** very strong academics, extremely fast learner, independent problem solver, competent programmer and designer

Selected Work Experience

Side Effects Software Fall 2003 – Spring 2006 Toronto, ON
3D Software Developer, Houdini dynamics team

- Researched, designed and programmed physics-based cloth simulator
- Read dozens of papers, and combined ideas to get new model
- Features include cloth/solid and cloth/cloth collision response, Delaunay triangulated panels for clothing
- Contributed to architecture for physics simulation
- Worked remotely on an independent basis from Vancouver, BC

discreet (Autodesk) Summer 2001 Montréal, QC
Intern, Toxik 3D team

- Worked on 3D tools for high performance compositing tools suite
- Redesigned 3D geometry class from the ground up

Side Effects Software Fall 2000 Toronto, ON
Intern, Houdini animation team

- Revised animation tools: channel editor and keyframe dopesheet

alt.software Summer 1999 Toronto, ON
Intern, BeOS Matrox team

- Designed and wrote BeOS video capture driver for Matrox G400 and video output driver for Matrox Marvel
- Worked on preliminary design of BeOS OpenGL driver for G400

Alias | Wavefront Fall 1998 / Summer 1997 Toronto, ON
Intern, StudioPaint team / Maya 1.0 team

- Worked on a high-end 2D paint and 3D texture painting application, and on a 3D modelling and animation package
- Optimised memory manager, achieving 4x acceleration in some cases
- Tracked and fixed bugs related to OpenGL texturing subsystem

University of Waterloo 1998, 1999 (part time) Waterloo, ON
Undergraduate Research Assistant, Computer Graphics Lab, Dr. M. McCool

- Enhanced C library to generate realistic shadows in OpenGL
- Improved tool for creating a tcl interface for a C++ library

Education

University of British Columbia 2001–2003 Vancouver, BC
M.Sc. in Computer Science

- Overall average of 92%
- Thesis dealt with capturing cloth shape from stereo video
- Peer-reviewed paper published in Computer Graphics Forum (2003)
- Presented paper at Eurographics 2003 (Granada, Spain), and sketch at SIGGRAPH 2003 (San Diego, USA)

University of Waterloo 1996–2001 Waterloo, ON
B.A.Sc. in Computer Engineering

- Overall average of 90% with two mentions on Dean's Honour List
- One year exchange to l'École Polytechnique Fédérale de Lausanne, Switzerland (1999–2000)

Awards Received

- NSERC graduate scholarship of \$16,000 per year over two years (2001)
- British Columbia ASI fellowship, \$5000 value (2001)
- W.W. King Exchange Fellowship (1999)
- University of Waterloo entrance scholarship (1996)
- Gold medallist in Canadian Computing Competition (1996)
- Chosen for Team Canada, International Olympiad in Informatics (1996)
- Top 1% in Canada in Descartes mathematics contest (1996)

Interests and Activities

- Volunteer in municipal bicycle advocacy: director of Vancouver Area Cycling Coalition (2005–), chair of City's Bicycle Network Subcommittee (2005–), volunteer advocate (2003–)
- Released Freecloth, an open source cloth simulator (2002)
- Sports: cycling, hiking, running, snowboarding, windsurfing, squash

Languages

English: mother tongue

French: excellent comprehension, good spoken; some written