Juan Quiroz

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Education

8/2007 – 05/2010	University of Nevada, Reno	Reno, NV
Doctor of Philosophy in Computer Science and Engineering		GPA: 4.0

Dissertation: Creative Design Using Collaborative Interactive Genetic Algorithms.

8/2005 – 5/2007	University of Nevada, Reno	Reno, NV
Master of Science in Computer Science		GPA: 4.0

Thesis: Interactively Evolving User Interfaces

8/2001 – 5/2005	University of Nevada, Reno	Reno, NV
B.Sc. Mathematics and Computer Science with Distinction		GPA: 3.74

Experience

1/2009 - Present   **SilverSky Group**   Reno, NV
Intellectual Property Specialist
- Patent preparation and patent prosecution.

8/2005 - Present   **Evolutionary Computing Systems Lab**   Reno, NV
Research Assistant
- Part of the development team of the Lagoon project (http://lagoon.cse.unr.edu). The Lagoon project is a naval simulation system designed for the Surface Warfare Officers School for the training of their officers. My responsibilities included the creation and maintenance of the GUI.
- Developed an interactive genetic algorithm framework in Python.
- Current research is on the use and evaluation of interactive evolutionary techniques for creative applications such as document design, floorplanning, and 3D modeling.

6/2007 – 8/2007   **Lawrence Livermore National Laboratory**   Reno, NV
                             Joint Genome Institute
Summer Scholar
- Used neuroevolution, support vector machines, and Weka algorithms to identify promoter regions in bacterial DNA.
- Neuroevolution and a DNA visualizer were implemented with F#, a functional programming language founded on .NET.

3/2003 - 7/2005   **Senator Alan Bible Center for Applied Research**   Reno, NV
Software developer
- Programmed and maintained computer assisted telephone interview surveys with the use of the CASES programming language. The surveys developed include Behavioral Risk Factor Surveillance System, Native American Behavioral Risk Factor Surveillance System, and UNR alumni cohort studies.
- Developed an auto scheduling system which automated and optimized the delivery of call numbers to interviewers.
- Programmed UNR's online graduate student survey with PHP, MySQL, and Javascript.

Skills

o C++	o Java/Swing	o HTML/Javascript
o C	o Perl	o MySQL
o Python	o QT	o Lex/Yacc
o F#	o wxPython	o CVS/SVN/GIT
o PHP	o OpenGL	o UML

Awards

- Best presentation winner at the Third International Conference on Design Computing and Cognition (DCC'08 – June 2008).
- Third place winner at the 2007 SHPE Conference Technical Paper Competition (November 2007).
- Third place winner at the NTCC 2007 Graduate Technical Paper Competition (January 2007).
- Finalist at the First Annual I3 Fall Business Plan Competition (December 2006).
- Third place winner at the Nevada 2006 Donald W. Reynolds Governor's Cup business plan competition (April 2006).

Publications

- Banerjee, A., Quiroz, J.C. & Louis, S.J., 2008. A Model of Creative Design Using Collaborative Interactive Genetic Algorithms. In *Design Computing and Cognition '08*. Springer, pp. 397-416.
- Harris, F.C. et al., V-FIRE: Virtual Fire in Realistic Environments. *The 4th International Workshop on System/Software Architectures in Proceedings of The 2005 International Conference on Software Engineering Research and Practice*, 73-79.
- Miles, C. et al., 2007. Co-Evolving Influence Map Tree Based Strategy Game Players. In *Computational Intelligence and Games, 2007. CIG 2007. IEEE Symposium on*. pp. 88-95.
- Quiroz, J. et al., 2009. Towards Creative Design Using Collaborative Interactive Genetic Algorithms. In *Evolutionary Computation, 2009. CEC 2009. IEEE Congress on*.
- Quiroz, J. et al., 2007. Software Environment for Research on Evolving User Interface Designs. In *Software Engineering Advances, 2007. ICSEA 2007. International Conference on*. p. 84.
- Quiroz, J. et al., 2007. Interactive Genetic Algorithms for User Interface Design. In *Evolutionary Computation, 2007. CEC 2007. IEEE Congress on*. pp. 1366-1373.
- Quiroz, J.C., Banerjee, A. & Louis, S.J., 2008. IGAP: interactive genetic algorithm peer to peer. In *Proceedings of the 10th annual conference on Genetic and evolutionary computation*. Atlanta, GA, USA: ACM, pp. 1719-1720.
- Quiroz, J.C., Dascalu, S.M. & Louis, S.J., 2007. Human guided evolution of XUL user interfaces. In *CHI '07 extended abstracts on Human factors in computing systems*. San Jose, CA, USA: ACM Press, pp. 2621-2626.
- Quiroz, J.C., Louis, S.J. & Dascalu, S.M., 2007. Interactive evolution of XUL user interfaces. In *Proceedings of the 9th annual conference on Genetic and evolutionary computation*. London, England: ACM Press, pp. 2151-2158.