

Samuel Sarjant

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Personal

Born on April 4, 1987.

I am a self-confessed geek with a passion for artificial intelligence and ontology research. My PhD research involved developing a reinforcement learning algorithm for learning in relationally defined environments and my current PostDoc research involves developing techniques for extracting consistent ontological information from web resources in the OpenCyc ontological framework. I completed my PhD in Computer Science in 2013 at The University of Waikato and am currently employed there as a Research Fellow undertaking research in the fields of ontology, Natural Language Processing, and the Semantic Web. I also lecture for the Artificial Intelligence and Game Design courses at Waikato.

My skills and research specialities include Reinforcement Learning, Formal Ontology Experience, Natural Language Processing, Machine Learning, 3D Game Design, strong Java skills, academic writing experience (including \LaTeX), and three years of lecturing experience.

Education and Employment

Research Fellow at The University of Waikato — research and development of a three year, Marsden-funded project¹ with 50% lecturing position, 2012–2015.

Research focuses on Knowledge Extraction from Web Resources for a large, general-purpose ontology. Primarily involves Natural Language Processing, Semantic Web applications, and Machine Learning.

Lecturing classes included two 3rd year papers: ‘Artificial Intelligence Techniques and Applications’ and ‘Graphics and Computer Games’ taught for 3 years.

I have supervised four Honours students (two ongoing), and published two papers with these students.

Participated in 2nd IAOA Interdisciplinary Summer School on Ontological Analysis, Rio de Janeiro, 2014

Ph.D. Computer Science, *CERRLA: Cross-Entropy Relational Reinforcement Learning Agent*, University of Waikato, 2009–2013.

Participated in Machine Learning Summer School Canberra, 2010

Bachelor of Computer Science with First Class Honours, University of Waikato, 2009.

¹Links to Marsden project resources: bit.ly/M0Iwaikato & github.com/Effervex

Awards and Achievements

Founder and President of the University of Waikato Boardgaming Club, 2014–2015.

Finance and Transport chair for NZCSRSC 2013 student conference, 2013.

IEEE/WIC/ACM WI Joint Conference Best Student Paper Award, 2009.

TEC Top Achiever Doctoral Scholarship, 2009.

University of Waikato Summer Research Scholarship, 2008.

University of Waikato Best Honours Project Conference Award, 2008.

University of Waikato Doctoral Scholarship, 2008.

Publications

† Significant research outputs.

Sarjant, S., Legg, C., Hu, Y.: *Discovering Disjointness: Automatic harvesting of Disjoint Axioms in the Context of an Existing Large-Scale Ontology* Submitted to: The 14th International Semantic Web Conference, 2015.

† Sarjant, S., Legg, C., Stannett, M., Willcock, D.: *Crowd-sourcing ontology content and curation: The massive ontology interface*. The 8th International Conference on Formal Ontology in Information Systems, Conference held at Rio de Janeiro, Brazil, 22 Sep 2014 - 25 Sep 2014. Editors: Pawel Garbacz, Oliver Kutz. *Formal Ontology in Information Systems*. IOS Press. 267: 251-260. 2014.

† Sarjant, S., Pfahringer, B., Driessens, K., Smith, T.: *A Direct Policy-Search Algorithm for Relational Reinforcement Learning*. In *Inductive Logic Programming*. Editors: Zaverucha G, Santos Costa V, Paes A. 76-92. Springer Berlin Heidelberg, 2014.

Stannett, M., Legg, C., Sarjant, S.: *Massive Ontology Interface*. 14th Annual Conference of the New Zealand Chapter of the ACM Special Interest Group on Computer-Human Interaction (CHINZ), 2013.

Legg, C., Sarjant, S.: *Ontological Quality Control in Large-scale, Applied Ontology Matching*. *Ontology Matching workshop (OM2013) at International Semantic Web Conference (ISWC)*, 2013.

Sarjant, S.: *Policy Search Based Relational Reinforcement Learning using the Cross-Entropy Method*. PhD Thesis, The University of Waikato, 2013.

Legg, C., Sarjant, S.: *Bill Gates is not a parking meter: philosophical quality control in automated ontology-building*. Conference held at University of Birmingham, Birmingham UK, 02 Jul 2012 - 06 Jul 2012. Editors: Beavers AF. AISB/IACAP World Congress 2012. *The International Association for Computing and Philosophy*. 29-33. 02 Jul 2012

Sarjant, S., Pfahringer, B., Driessens, K., Smith, T.: *Using the Online Cross-Entropy Method to Learn Relational Policies for Playing Different Games*. *IEEE Computational Intelligence and Games (CIG '11)* 2011, pp 182-189, 2011.

Sarjant, S., Legg, C., Robinson, M., Medelyan, O.: *"All You Can Eat" Ontology-Building: Feeding Wikipedia to Cyc*. *IEEE/WIC/ACM International Conference on Web Intelligence and Intelligent Agent Technology (WI-IAT)* 2009, pp 341-348. **(Best Student Paper Award)**