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From MAS-Students_ss15

Title: Evolutionary Robotics
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Abstract

Brief description of your task and how you went about to solve it.

Introduction

Based on the literature (survey articles, books, journals, conference proceedings), which you have found explain and discuss how the scientific subject which you have been investigating is embedded in the superior field, e.g. learning by experimentation is sub field of machine learning ... What are neighboring disciplines (inductive learning, one-shot learning, reinforcement learning, etc)? What are the special aspects which are addressed in the subject and how do they distinguish the subject from neighboring subjects/disciplines? What are the typical assumptions made in the research on the subject? What is the methodology used in the field? (one page)

Description of the subject

Based on the literature (survey articles, books, journals, conference proceedings), which you have found explain and discuss how the scientific subject which you have been investigating is decomposed into different subfields and/or aspects and/or problem areas (e.g. learning by experimentation: cognitive/developmental psychology, epistemology, theory of experimentation, optimal design and evaluation of experiments, etc. Explain for each subfield/aspect/problem area why you think that is is of crucial importance to the subject which you have beQen investigating. Explain why you think that the set of subfields/aspects/problems which you have identified in fact covers the whole subject. (one page)

Annotated Bibliography <Topic>

In this section you should establish a subsection for each subfield/aspect/problem area which you have identified in the foregoing Section ("Description of the subject"). In each of the subsection you give a brief overview of the subfield list the annotated bibliography, i.e. all the papers which you found for this subfield, where each entry in this annotated bibliography should consist of the reference itself and a brief summary of the content of the paper. (as many pages as it takes)

For example:

Conclusions

Summarize you view on the state of the art in the field which you have been investigating. (half a page, times roman 11pt,

single space)

References

<thead></thead> <tbody> </tbody>

Author	Title	Year	Journal/Proceedings	Reftype	DOI/URL
Baele, G., Bredeche, N., Haasdijk, E., Maere, S., Michiels, N., Van de Peer, Y., Schmickl, T., Schwarzer, C. and Thenius, R.	Open-ended on-board evolutionary robotics for robot swarms	2009	Evolutionary Computation, 2009. CEC'09. IEEE Congress on, pp. 1123-1130	inproceedings	
Bianco, R. and Nolfi, S.	Toward open-ended evolutionary robotics: evolving elementary robotic units able to self-assemble and self-reproduce	2004	Connection Science Vol. 4, pp. 227-248	article	
Bongard, J.C. and Hornby, G.S.	Combining fitness-based search and user modeling in evolutionary robotics	2013	Proceedings of the 15th annual conference on Genetic and evolutionary computation, pp. 159-166	inproceedings	
Bredeche, N. and Hugues, L.	Evolutionary Robotics: incremental learning of sequential behavior	2005	Development and Learning, 2005. Proceedings., The 4th International Conference on, pp. 128-128	inproceedings	
Cliff, D., Husbands, P. and Harvey, I.	Explorations in evolutionary robotics	1993	Adaptive behavior Vol. 2(1), pp. 73-110	article	
Clune, J., Stanley, K.O., Pennock, R.T. and Ofria, C.	On the performance of indirect encoding across the continuum of regularity	2011	Evolutionary Computation, IEEE Transactions on Vol. 15(3), pp. 346-367	article	
Coello Coello, C.A.	Evolutionary multi-objective optimization: a historical view of the field	2006	Computational Intelligence Magazine, IEEE Vol. 1(1), pp. 28-36	article	
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Doncieux, S., Bredeche, N., Mouret, J.-B. and Eiben,	Evolutionary robotics: what, why, and where to	2015	Frontiers in Robotics and AI Vol. 2, pp. 4	article	

A.E.G.					
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Ficici, S.G., Watson, R.A. and Pollack, J.B.	Embodied evolution: A response to challenges in evolutionary robotics	1999	Proceedings of the eighth European workshop on learning robots, pp. 14-22	inproceedings	
Floreano, D., Husbands, P. and Nolfi, S.	Evolutionary robotics	2008	Springer handbook of robotics, pp. 1423-1451	incollection	
Floreano, D., Nolfi, S. and Mondada, F.	Competitive co-evolutionary robotics: From theory to practice	1998	Vol. 4(LIS-CONF-1998-002)Proceedings of the fifth international conference on simulation of adaptive behavior, From Animals to Animats 5, pp. 515-524	inproceedings	
Floreano, D. and Urzelai, J.	Evolutionary robotics: The next generation	2000		techreport	
Grefenstette, J.	Evolutionary algorithms in robotics,"	1994	International Symposium on Robotics and Manufacturing (ISRAM)	inproceedings	
Gruau, F. and Quatramaran, K.	Cellular encoding for interactive evolutionary robotics	1997	Fourth European Conference on Artificial Life, pp. 368-377	inproceedings	
Hamann, H., Stradner, Jü., Schmickl, T. and Crailsheim, K.	A hormone-based controller for evolutionary multi-modular robotics: From single modules to gait learning	2010	simulation Vol. 5, pp. 6	article	
Harvey, I., Husbands, P., Cliff, D. and others	Issues in evolutionary robotics	1992		book	
Harvey, I., Husbands, P., Cliff, D., Thompson, A. and Jakobi, N.	Evolutionary robotics: the Sussex approach	1997	Robotics and autonomous systems Vol. 20(2), pp. 205-224	article	

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Kashtan, N. and Alon, U.	Spontaneous evolution of modularity and network motifs	2005	Proceedings of the National Academy of Sciences of the United States of America Vol. 102(39), pp. 13773-13778	article	
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Mouret, J.B. and Doncieux, S.	Encouraging Behavioral Diversity in Evolutionary Robotics: An Empirical Study	2012	Evol. Comput. Vol. 20(1), pp. 91-133	article	<a href="http://dx.doi.org/10.1162/EVCO_a_00048">DOI</a> <a href="http://dx.doi.org/10.1162/EVCO_a_00048">URL</a>
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Watanabe, K. and Izumi, K.	A survey of robotic control systems constructed by using evolutionary computations	1999	Vol. 2Systems, Man, and Cybernetics, 1999. IEEE SMC'99 Conference Proceedings. 1999 IEEE International Conference on, pp. 758-763	inproceedings	
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Zagal, J.C., Ruiz-del-Solar, J. and Vallejos, P.	Back to reality: Crossing the reality gap in evolutionary robotics	2004	IAV 2004 the 5th IFAC Symposium on Intelligent Autonomous Vehicles, Lisbon, Portugal	inproceedings	
Zykov, V., Mytilinaios, E., Adams, B. and Lipson, H.	Robotics: Self-reproducing machines	2005	Nature Vol. 435(7039), pp. 163-164	article	
Zykov, V., Mytilinaios, E., Desnoyer, M. and Lipson, H.	Evolved and designed self-reproducing modular robotics	2007	Robotics, IEEE Transactions on Vol. 23(2), pp. 308-319	article	

List of references in IEEE, ACM, APA, etc. format.
Attach an electronic copy of the paper to each reference!!!!!!!!!

Appendix

A. Links to HTML tables

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Link to the HTML table with your Top 100
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Link to the HTML table with your Top 30
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B. Your link collection of online literature search

C. Sources

A.1 List of searched journals

- IEEE Transactions on Robotics and Automation, Vol. 1 No. 1 - ??, 1901 - 2005
- IEEE Transactions on Robotics, Vol. 1 No. 1 - ??, 1901 – 2005
- ...

A.2 List of searched conference proceedings

- IEEE Int. Conf. on Robotics and Automation ICRA, 1901 – 2005
- IEEE/RSJ Int. Conf on Intelligent Robots and Systems IROS, 1901 – 2005
- ...

A.3 List of searched magazines

- IEEE Robotics and Automation Magazine (RAM)
- ...

A.4 Other searched publications

- New York Times 1801 – 2005
- ...

D. Key words and key word combinations used for search

pictured either as structured list or as tree

E. List of most important conferences

F. List of most important journals and magazines

G. List of top research labs/researchers

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