Name	Joost Huizinga
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	United States of America
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Date of Birth	03-08-1986

Education

Program	**Ph. D. Computer Science**	Jan 14 2013 — Aug 10 2018
Institute	**University of Wyoming**	Laramie, USA
	Working in the Evolving Artificial Intelligence Laboratory led by Jeff Clune.	
Program	**Master Artificial Intelligence**	Sep 01 2010 — Aug 31 2012
Institute	**VU University**	Amsterdam, Netherlands
	Specialized in Computational Intelligence and Self-Organization. Optional courses focused on distributed and parallel computing.	
Program	**Bachelor Artificial Intelligence**	Sep 01 2005 — Aug 31 2010
Institute	**VU University**	Amsterdam, Netherlands
	Graduated two years behind schedule mainly due to the many side activities I was involved in, including my job at OGD and my position as a board member for the study association STORM.	

Occupation

Job	**Research Scientist**	Jul 6 2020 — Present
Employer	**OpenAI**	San Francisco, USA
	Research scientist on the multiagent team from Jul 2020 to May 2022 and research scientist on the alignment team from May 2022 to present. As part of the multiagent team I studied ways to create emergent intelligence through agent interactions in diverse environments, and as part of the alignment team I study ways to align Artificial General Intelligence (AGI) through human feedback and evaluate models for potentially dangerous capabilities. Contributed to GPT-4 on initial fine-tuning derisking, dataset, model safety, refusals, RLHF/InstructGPT, flagship training runs, safety and policy evaluations, adversarial testing, system card impact analysis, and blog and paper content. Tasks include implementing algorithms with python and Pytorch, designing and running experiments, and analyzing the results.	
Job	**Research Scientist**	Aug 27 2018 — Jun 1 2020
Employer	**Uber AI Labs**	San Francisco, USA
	Researching novel RL algorithms for solving hard exploration problems. Tasks involve designing and implementing algorithms (mostly with Tensorflow in Python), analyzing results and writing scientific papers.	
Job	**Research Intern**	Jun 04 2018 — Aug 24 2018
Employer	**Uber AI Labs**	San Francisco, USA
	Same as my job as Research Scientist above.	

Job	**Temporary worker**	Jan 01 2006 — Feb 28 2009
Employer	**OGD**	Amsterdam, Netherlands

Working for OGD (Operator Group Delft) I have been a temporary worker for various different companies including: Nissan Moter Parts (Internal Helpdesk Employer), Vrije Universiteit (Internal Helpdesk Employer), XS4ALL (External Helpdesk Employer), Bookings.com (Internal Helpdesk Employer), Trimbos Institute Utrecht (VBA programmer), Ter Gooi Hospital (Internal Heldpdesk Employer) and FGH Bank NV (VBA programmer).

Journal Publications

Title	**Evolving Multimodal Robot Behavior via Many Stepping Stones with the Combinatorial Multi-Objective Evolutionary Algorithm**
Cite	Huizinga J, Clune J (2022) Evolving Multimodal Robot Behavior via Many Stepping Stones with the Combinatorial Multi-Objective Evolutionary Algorithm. Evolutionary Computation.
Title	**Environmental, individual and social traits of free-ranging raccoons influence performance in cognitive testing**
Cite	Stanton LA, Bridge ES, Huizinga J, Benson-Amram S (2022). Environmental, individual and social traits of free-ranging raccoons influence performance in cognitive testing. Journal of Experimental Biology, 225(18), jeb243726.
Title	**First return then explore**
Cite	Ecoffet A, Huizinga J *(shared first author)*, Lehman J, Stanley KO, Clune J (2021) First return then explore. **Nature** 590 (7847), 580-586.
Title	**Variation in reversal learning by three generalist mesocarnivores**
Cite	Stanton LA, Bridge ES, Huizinga J, Johnson SR, Young JK, Benson-Amram S (2021). Variation in reversal learning by three generalist mesocarnivores. Animal Cognition, 24(3), 555-568.
Title	**Guiding Neuroevolution with Structural Objectives**
Cite	Ellefsen KO, Huizinga J, Torresen J (2019) Guiding Neuroevolution with Structural Objectives. Evolutionary computation, pp.1-25.
Title	**The Emergence of Canalization and Evolvability in an Open-Ended, Interactive Evolutionary System.**
Cite	Huizinga J, Stanley K, Clune J (2018) The Emergence of Canalization and Evolvability in an Open-Ended, Interactive Evolutionary System. Artificial life, 24(3), pp.157-181.
Title	**The evolutionary origins of hierarchy**
Cite	Mengistu H, Huizinga J, Mouret JB, Clune J (2016) The evolutionary origins of hierarchy. PLoS Computational Biology. 12(6).

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Conference Publications

Title	**Video PreTraining (VPT): Learning to act by watching unlabeled online videos**
Cite	Baker, B, Akkaya I, Zhokov P, Huizinga J, Tang J, Ecoffet A, Houghton B, Sampedro R, Clune J. (2022) Video PreTraining (VPT): Learning to act by watching unlabeled online videos. Advances in Neural Information Processing Systems 35: 24639-24654 *(25.6% acceptance rate).*
Title	**Scaling MAP-Elites to deep neuroevolution**
Cite	Colas C, Madhavan V, Huizinga J, Clune J (2020) Scaling MAP-Elites to deep neuroevolution. Proceedings of the Genetic and Evolutionary Computation Conference. 67-75.
Title	**Does Aligning Phenotypic and Genotypic Modularity Improve the Evolution of Neural Networks?**
Cite	Huizinga J, Mouret JB, Clune J (2016) Does Aligning Phenotypic and Genotypic Modularity Improve the Evolution of Neural Networks? Proceedings of the Genetic and Evolutionary Computation Conference. 125-132.
Title	**Evolving Neural Networks That Are Both Modular and Regular: HyperNeat Plus the Connection Cost Technique**
Cite	Huizinga J, Mouret JB, Clune J (2014) Evolving Neural Networks That Are Both Modular and Regular: HyperNeat Plus the Connection Cost Technique. Proceedings of the Genetic and Evolutionary Computation Conference. 697-704.

Arxiv Publications

Title	**GPT-4 Technical Report**
Cite	OpenAI (2023). GPT-4 Technical Report. arXiv preprint arXiv:2303.08774 *(Contributed on initial fine-tuning derisking, dataset, model safety, refusals, RLHF/InstructGPT, flagship training runs, safety and policy evaluations, adversarial testing, system card impact analysis, and blog and paper content).*
Title	**Multi-task curriculum learning in a complex, visual, hard-exploration domain: Minecraft**
Cite	Kanitscheider I, Huizinga J, Farhi D, Guss WH, Houghton B, Sampedro R, et al. (2021). Multi-task curriculum learning in a complex, visual, hard-exploration domain: Minecraft. arXiv preprint arXiv:2106.14876.
Title	**Exploration Based Language Learning for Text-Based Games**
Cite	Madotto A, Namazifar M, Huizinga J, Molino P, Ecoffet A, Zheng H, Papangelis A, Yu D, Khatri C, Tur G (2020) Exploration Based Language Learning for Text-Based Games. arXiv preprint arXiv:2001.08868.
Title	**Go-explore: a new approach for hard-exploration problems**
Cite	Ecoffet A, Huizinga J, Lehman J, Stanley KO, Clune J (2019) Go-Explore: a New Approach for Hard-Exploration Problems. arXiv preprint arXiv:1901.10995.

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Grants and awards

Award	**Ellbogen Next Generation Program**	Sept 1 2017
	Grant awarded to the Laramie Robotics Club, obtained as Treasurer, of $5,000.	
Award	**Summer Doctoral Augmentation**	May 12 2017
	Received the Summer Doctoral Augmentation scholarship and tuition award of $2,200.	
Grant	**Oak Ridge Directors Discretion Allocation**	May 2 2016
	Allocation of 120,000 Titan core hours (estimated value: $4,800).	
Award	**Best video, AAAI Video Competition**	Jul 31 2014
	Awarded to my video "Evolving Neural Networks That Are Both Modular and Regular" (youtu.be/FUqYNRZTl3U).	
Grant	**GECCO 2014 Student travel grant**	May 1 2014
	Awarded $300 for travel to the GECCO 2014 conference.	

Talks

Forum	**PhD Defense**	May 9 2018
Title	**Evolving Structurally Organized Neural Networks**	
	Presentation of my dissertation research regarding evolving structural organization in artificial neural networks.	
Forum	**CAM Seminar**	Mar 23 2018
Title	**Evolving Structurally Organized Neural Networks**	
	Presentation of my dissertation research regarding evolving structural organization in artificial neural networks.	
Forum	**GECCO conference**	July 22 2016
Title	**Does Aligning Phenotypic and Genotypic Modularity Improve the Evolution of Neural Networks?**	
	Presentation of my conference paper regarding aligning genotypic and phenotypic modularity.	
Forum	**GECCO conference**	July 16 2014
Title	**Evolving Neural Networks that are Both Modular and Regular**	
	Presentation of my conference paper on evolving neural networks that are both modular and regular.	
Forum	**Computer Science Research Seminar**	Nov 25 2013
Title	**Evolving Neural Networks that are Both Modular and Regular**	
	Talk about my early research in evolving neural networks that are both modular and regular.	

Technical Skills

Skill	**Programming languages (primary)**
	C++, python.
Skill	**Programming languages (other)**
	Java, C, VBA, prolog, jess, bash script, Matlab script, R script, O-caml, C#.

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Skill	**Artificial Intelligence Libraries**
	The primary artificial intelligence libraries and frameworks that I have worked with are: Sferes v2, Tensorflow, and Pytorch.
Skill	**Operating Systems**
	Windows XP, Linux (Ubuntu), Mac OS
Skill	**Artificial Intelligence Techniques**
	Deep reinforcement learning, Evolutionary computing, Neural networks, Deep learning, Architecture search.

Service

Subject	**Reviewer**
	• Program Committee ALIFE track at GECCO 2013 • Transactions on Computational Intelligence and AI in Games 2014 • Program Committee EvoROBOT 2015 • Program Committee GDS track at GECCO 2015 • Reviewer Artificial Life Journal 2015 • Program Committee Complex Systems track at GECCO 2016 • Program Committee EvoROBOT 2016 • Program Committee IEEE CEC 2016 • Program Committee AAAI Video Competition 2016 • Program Committee AAAI Video Competition 2017 • Program Committee IEEE CEC 2017 • Program Committee GECCO 2017 • Program Committee EvoROBOT 2017 • Program Committee EvoROBOT 2018 • Program Committee IEEE CEC 2018 • Program Committee GECCO 2018 • Reviewer for PLOS Computational Biology 2018 • Program Committee EvoROBOT 2019 • Program Committee IEEE CEC 2019 • Program Committee GECCO 2019 • Reviewer for Autonomous Robots (AURO) 2019 • Program Committee GECCO 2020 • Program Committee GECCO 2021 • Program Committee GECCO 2022 • Program Committee GECCO 2023

Additional information

Subject	**Robotics Contest**	Jun 21 2017
	Been a judge at the 4-H Showcase Showdown Robotics Contest at the University of Wyoming.	
Subject	**COINMAC Collaboration**	Apr 2017
	Helped writing the proposal for and participated in the Collaboration on Intelligent Machines (COINMAC) with the University of Oslo and other partners. The proposal was awarded a $546,000 grant.	
Subject	**Advertising Campaign**	Oct 25 2016
	Featured in a video called "Wyoming's Greatest Resource - No.5 - Jeff Clune" (youtu.be/YCXFC9oOfM0).	

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Subject	**Member of the COSC Graduate Student Social Committee** Dec 3 2014 — Aug 10 2018
	Member of the COSC Graduate Student Social Committee involved in organizing social events for the graduate students in the computer science program.
Subject	**Vice President Laramie Robotics Club** Sept 31 2017 — Aug 10 2018
	Vice President of the Laramie Robotics Club which aims to have fun with robots while teaching essential programming skills to middle and high-school students.
Subject	**Treasurer Laramie Robotics Club** Sept 24 2014 — Aug 31 2017
	Treasurer of the Laramie Robotics Club which aims to have fun with robots while teaching essential programming skills to middle and high-school students.
Subject	**Advertising Campaign** Oct 29 2013
	Been part of a University of Wyoming advertising campaign called "Can one university make an impact?".
Subject	**Board member STORM** Nov 19 2007 — Oct 13 2008
	Board member of the study association STORM for Math and Computer Science at the VU University Amsterdam. My responsibilities included education assessment and book sales.
Subject	**Personal information**
	I am a research scientist at OpenAI with a passion for studying artificial intelligence. Besides that, I have also participated in programming and hacking competitions, been a board member of the local study association, and become a treasurer for the Laramie Robotics Club. Hobbies include scouting, gaming (board games as well as video games), programming, climbing, and snowboarding.

References

Name	**Evert Haasdijk**
Role	**Master's project adviser**
Contact	**evert.haasdijk@gmail.com** +31 (0)20 59 87668
	Employee at Deloitte and former assistant professor at the VU University in Amsterdam.
Name	**Jeff Clune**
Role	**Ph. D. Adviser and Manager**
Contact	**jclune@gmail.com** +1 (517) 214 1060
	Associate Professor Computer Science at the University of British Columbia
Name	**Jean-Baptiste Mouret**
Role	**Coauthor**
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	Senior Researcher at Inria in Nancy.
Name	**Ken Stanley**
Role	**Coauthor and Manager**
Contact	**kstanley@cs.ucf.edu** +1 (407) 473 0072
	Professor at the University of Central Florida.

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