Demis Hassabis

List of Publications by Year
in descending order

62 papers	81,034 citations	29994 54 h-index	114278 63 g-index
64 all docs	64 docs citations	64 times ranked	50451 citing authors

#	Article	IF	Citations
1	AlphaFold Protein Structure Database: massively expanding the structural coverage of protein-sequence space with high-accuracy models. Nucleic Acids Research, 2022, 50, D439-D444.	6.5	3,692
2	Protein structure predictions to atomic accuracy with AlphaFold. Nature Methods, 2022, 19, 11-12.	9.0	145
3	Magnetic control of tokamak plasmas through deep reinforcement learning. Nature, 2022, 602, 414-419.	13.7	244
4	Use of deep learning to develop continuous-risk models for adverse event prediction from electronic health records. Nature Protocols, 2021, 16, 2765-2787.	5.5	41
5	Highly accurate protein structure prediction with AlphaFold. Nature, 2021, 596, 583-589.	13.7	17,754
6	Highly accurate protein structure prediction for the human proteome. Nature, 2021, 596, 590-596.	13.7	1,773
7	Applying and improving <scp>AlphaFold</scp> at <scp>CASP14</scp>. Proteins: Structure, Function and Bioinformatics, 2021, 89, 1711-1721.	1.5	231
8	Unsupervised deep learning identifies semantic disentanglement in single inferotemporal face patch neurons. Nature Communications, 2021, 12, 6456.	5.8	40
9	Advancing mathematics by guiding human intuition with AI. Nature, 2021, 600, 70-74.	13.7	158
10	Pushing the frontiers of density functionals by solving the fractional electron problem. Science, 2021, 374, 1385-1389.	6.0	174
11	International evaluation of an AI system for breast cancer screening. Nature, 2020, 577, 89-94.	13.7	1,458
12	Mastering Atari, Go, chess and shogi by planning with a learned model. Nature, 2020, 588, 604-609.	13.7	570
13	Predicting conversion to wet age-related macular degeneration using deep learning. Nature Medicine, 2020, 26, 892-899.	15.2	178
14	Improved protein structure prediction using potentials from deep learning. Nature, 2020, 577, 706-710.	13.7	2,112
15	A distributional code for value in dopamine-based reinforcement learning. Nature, 2020, 577, 671-675.	13.7	262
16	A clinically applicable approach to continuous prediction of future acute kidney injury. Nature, 2019, 572, 116-119.	13.7	652
17	Protein structure prediction using multiple deep neural networks in the 13th Critical Assessment of Protein Structure Prediction (CASP13). Proteins: Structure, Function and Bioinformatics, 2019, 87, 1141-1148.	1.5	242
18	Grandmaster level in StarCraft II using multi-agent reinforcement learning. Nature, 2019, 575, 350-354.	13.7	1,491

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19	Human-level performance in 3D multiplayer games with population-based reinforcement learning. Science, 2019, 364, 859-865.	6.0	286
20	Slow escape decisions are swayed by trait anxiety. Nature Human Behaviour, 2019, 3, 702-708.	6.2	60
21	Reinforcement Learning, Fast and Slow. Trends in Cognitive Sciences, 2019, 23, 408-422.	4.0	364
22	Reply to HuszÃ¡r: The elastic weight consolidation penalty is empirically valid. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E2498.	3.3	5
23	How cognitive and reactive fear circuits optimize escape decisions in humans. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 3186-3191.	3.3	102
24	A general reinforcement learning algorithm that masters chess, shogi, and Go through self-play. Science, 2018, 362, 1140-1144.	6.0	1,704
25	Prefrontal cortex as a meta-reinforcement learning system. Nature Neuroscience, 2018, 21, 860-868.	7.1	378
26	Vector-based navigation using grid-like representations in artificial agents. Nature, 2018, 557, 429-433.	13.7	414
27	Clinically applicable deep learning for diagnosis and referral in retinal disease. Nature Medicine, 2018, 24, 1342-1350.	15.2	1,551
28	Neural scene representation and rendering. Science, 2018, 360, 1204-1210.	6.0	285
29	Overcoming catastrophic forgetting in neural networks. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 3521-3526.	3.3	2,653
30	Mastering the game of Go without human knowledge. Nature, 2017, 550, 354-359.	13.7	5,208
31	Neuroscience-Inspired Artificial Intelligence. Neuron, 2017, 95, 245-258.	3.8	934
32	Computations Underlying Social Hierarchy Learning: Distinct Neural Mechanisms for Updating and Representing Self-Relevant Information. Neuron, 2016, 92, 1135-1147.	3.8	117
33	Neural Mechanisms of Hierarchical Planning in a Virtual Subway Network. Neuron, 2016, 90, 893-903.	3.8	128
34	Hybrid computing using a neural network with dynamic external memory. Nature, 2016, 538, 471-476.	13.7	799
35	Semantic representations in the temporal pole predict false memories. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 10180-10185.	3.3	80
36	What Learning Systems do Intelligent Agents Need? Complementary Learning Systems Theory Updated. Trends in Cognitive Sciences, 2016, 20, 512-534.	4.0	386

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37	Mastering the game of Go with deep neural networks and tree search. Nature, 2016, 529, 484-489.	13.7	9,796
38	Human-level control through deep reinforcement learning. Nature, 2015, 518, 529-533.	13.7	15,934
39	A Goal Direction Signal in the Human Entorhinal/Subicular Region. Current Biology, 2015, 25, 87-92.	1.8	114
40	Hippocampal place cells construct reward related sequences through unexplored space. ELife, 2015, 4, e06063.	2.8	206
41	Foraging under Competition: The Neural Basis of Input-Matching in Humans. Journal of Neuroscience, 2013, 33, 9866-9872.	1.7	48
42	Detecting Representations of Recent and Remote Autobiographical Memories in vmPFC and Hippocampus. Journal of Neuroscience, 2012, 32, 16982-16991.	1.7	191
43	Scene Construction in Amnesia: An fMRI Study. Journal of Neuroscience, 2012, 32, 5646-5653.	1.7	117
44	The Future of Memory: Remembering, Imagining, and the Brain. Neuron, 2012, 76, 677-694.	3.8	1,066
45	Is the brain a good model for machine intelligence?. Nature, 2012, 482, 462-463.	13.7	28
46	Multi-voxel pattern analysis in human hippocampal subfields. Frontiers in Human Neuroscience, 2012, 6, 290.	1.0	74
47	Decoding representations of scenes in the medial temporal lobes. Hippocampus, 2012, 22, 1143-1153.	0.9	62
48	Role of the hippocampus in imagination and future thinking. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, E39.	3.3	71
49	Decoding overlapping memories in the medial temporal lobes using high-resolution fMRI. Learning and Memory, 2011, 18, 742-746.	0.5	53
50	Autobiographical memory in semantic dementia: A longitudinal fMRI study. Neuropsychologia, 2010, 48, 123-136.	0.7	83
51	Differential engagement of brain regions within a â€˜coreâ€™ network during scene construction. Neuropsychologia, 2010, 48, 1501-1509.	0.7	125
52	Imagining fictitious and future experiences: Evidence from developmental amnesia. Neuropsychologia, 2010, 48, 3187-3192.	0.7	114
53	Decoding Individual Episodic Memory Traces in the Human Hippocampus. Current Biology, 2010, 20, 544-547.	1.8	187
54	From Threat to Fear: The Neural Organization of Defensive Fear Systems in Humans. Journal of Neuroscience, 2009, 29, 12236-12243.	1.7	384

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55	Decoding Neuronal Ensembles in the Human Hippocampus. Current Biology, 2009, 19, 546-554.	1.8	197
56	Tracking the Emergence of Conceptual Knowledge during Human Decision Making. Neuron, 2009, 63, 889-901.	3.8	227
57	Cortical midline involvement in autobiographical memory. NeuroImage, 2009, 44, 1188-1200.	2.1	177
58	When Fear Is Near: Threat Imminence Elicits Prefrontal-Periaqueductal Gray Shifts in Humans. Science, 2007, 317, 1079-1083.	6.0	798
59	Deconstructing episodic memory with construction. Trends in Cognitive Sciences, 2007, 11, 299-306.	4.0	995
60	Using Imagination to Understand the Neural Basis of Episodic Memory. Journal of Neuroscience, 2007, 27, 14365-14374.	1.7	675
61	Patients with hippocampal amnesia cannot imagine new experiences. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 1726-1731.	3.3	1,212
62	Impaired spatial and non-spatial configural learning in patients with hippocampal pathology. Neuropsychologia, 2007, 45, 2699-2711.	0.7	38