

Papers in 100 Lines of Code

Implementation of papers in 100 lines of code.

Implemented papers

[Maxout Networks]

- Maxout Networks [arXiv]
- *Ian J. Goodfellow, David Warde-Farley, Mehdi Mirza, Aaron Courville, Yoshua Bengio*
- 2013-02-18

[Playing Atari with Deep Reinforcement Learning]

- Playing Atari with Deep Reinforcement Learning [arXiv]
- *Volodymyr Mnih, Koray Kavukcuoglu, David Silver, Alex Graves, Ioannis Antonoglou, Daan Wierstra, Martin Riedmiller*
- 2013-12-19

[Auto-Encoding Variational Bayes]

- Auto-Encoding Variational Bayes [arXiv]
- *Diederik P Kingma, Max Welling*
- 2013-12-20

[Generative Adversarial Networks]

- Generative Adversarial Networks [arXiv]
- *Ian J. Goodfellow, Jean Pouget-Abadie, Mehdi Mirza, Bing Xu, David Warde-Farley, Sherjil Ozair, Aaron Courville, Yoshua Bengio*
- 2014-06-10

[Conditional Generative Adversarial Nets]

- Conditional Generative Adversarial Nets [arXiv]
- *Mehdi Mirza, Simon Osindero*
- 2014-11-06

[Adam: A Method for Stochastic Optimization]

- Adam: A Method for Stochastic Optimization [arXiv]
- *Diederik P. Kingma, Jimmy Ba*
- 2014-12-22

[NICE: Non-linear Independent Components Estimation]

- NICE: Non-linear Independent Components Estimation [arXiv]
- *Laurent Dinh, David Krueger, Yoshua Bengio*
- 2014-10-30

[Deep Unsupervised Learning using Nonequilibrium Thermodynamics]

- Deep Unsupervised Learning using Nonequilibrium Thermodynamics [arXiv]
- *Jascha Sohl-Dickstein, Eric A. Weiss, Niru Maheswaranathan, Surya Ganguli*
- 2015-03-12

[Variational Inference with Normalizing Flows]

- Variational Inference with Normalizing Flows [arXiv]
- *Danilo Jimenez Rezende, Shakir Mohamed*
- 2015-05-21

[Unsupervised Representation Learning with Deep Convolutional Generative Adversarial Networks]

- Convolutional Generative Adversarial Networks [arXiv]
- *Alec Radford, Luke Metz, Soumith Chintala*
- 2015-11-19

[Fast and Accurate Deep Network Learning by Exponential Linear Units (ELUs)]

- Fast and Accurate Deep Network Learning by Exponential Linear Units (ELUs) [arXiv]
- *Djork-Arné Clevert, Thomas Unterthiner, Sepp Hochreiter*
- 2015-11-23

[Adversarially Learned Inference]

- Adversarially Learned Inference [arXiv]
- *Vincent Dumoulin, Ishmael Belghazi, Ben Poole, Olivier Mastropietro, Alex Lamb, Martin Arjovsky, Aaron Courville*
- 2016-06-02

[Improved Techniques for Training GANs]

- Improved Techniques for Training GANs [arXiv]
- *Tim Salimans, Ian Goodfellow, Wojciech Zaremba, Vicki Cheung, Alec Radford, Xi Chen*
- 2016-06-10

[Gaussian Error Linear Units (GELUs)]

- Gaussian Error Linear Units (GELUs) [arXiv]
- *Dan Hendrycks, Kevin Gimpel*
- 2016-06-27

[Least Squares Generative Adversarial Networks]

- Least Squares Generative Adversarial Networks [arXiv]
- *Xudong Mao, Qing Li, Haoran Xie, Raymond Y.K. Lau, Zhen Wang, Stephen Paul Smolley*
- 2016-11-13

[Model-Agnostic Meta-Learning for Fast Adaptation of Deep Networks]

- Model-Agnostic Meta-Learning for Fast Adaptation of Deep Networks [arXiv]
- *Chelsea Finn, Pieter Abbeel, Sergey Levine*
- 2017-03-09

[Adversarial Feature Learning]

- Adversarial Feature Learning [arXiv]
- *Jeff Donahue, Philipp Krähenbühl, Trevor Darrell*
- 2017-04-03

[Self-Normalizing Neural Networks]

- Self-Normalizing Neural Networks [arXiv]
- *Günter Klambauer, Thomas Unterthiner, Andreas Mayr, Sepp Hochreiter*
- 2017-06-08

[Deep Image Prior]

- Deep Image Prior [arXiv]
- *Dmitry Ulyanov, Andrea Vedaldi, Victor Lempitsky*
- 2017-11-29

[On First-Order Meta-Learning Algorithms]

- On First-Order Meta-Learning Algorithms [arXiv]
- *Alex Nichol, Joshua Achiam, John Schulman*
- 2018-03-08

[Sequential Neural Likelihood]

- Sequential Neural Likelihood: Fast Likelihood-free Inference with Autoregressive Flows [arXiv]
- *George Papamakarios, David C. Sterratt, Iain Murray*
- 2018-05-18

[On the Variance of the Adaptive Learning Rate and Beyond]

- On the Variance of the Adaptive Learning Rate and Beyond [arXiv]
- *Liyuan Liu, Haoming Jiang, Pengcheng He, Weizhu Chen, Xiaodong Liu, Jianfeng Gao, Jiawei Han*
- 2019-08-08

[Optimizing Millions of Hyperparameters by Implicit Differentiation]

- Optimizing Millions of Hyperparameters by Implicit Differentiation [PMLR]
- *Jonathan Lorraine, Paul Vicol, David Duvenaud*
- 2019-10-06

[Implicit Neural Representations with Periodic Activation Functions]

- Implicit Neural Representations with Periodic Activation Functions [arXiv]
- *Vincent Sitzmann, Julien N. P. Martel, Alexander W. Bergman, David B. Lindell, Gordon Wetzstein*
- 2020-06-17

[Fourier Features Let Networks Learn High Frequency Functions in Low Dimensional Domains]

- Fourier Features Let Networks Learn High Frequency Functions in Low Dimensional Domains [arXiv]
- *Matthew Tancik, Pratul P. Srinivasan, Ben Mildenhall, Sara Fridovich-Keil, Nithin Raghavan, Utkarsh Singhal, Ravi Ramamoorthi, Jonathan T. Barron, Ren Ng*
- 2020-06-18

[Denoising Diffusion Probabilistic Models]

- Denoising Diffusion Probabilistic Models [arXiv]
- *Jonathan Ho, Ajay Jain, Pieter Abbeel*
- 2020-06-19

[Likelihood-free MCMC with Amortized Approximate Ratio Estimators]

- Likelihood-free MCMC with Amortized Approximate Ratio Estimators [PMLR]
- *Joeri Hermans, Volodimir Begy, Gilles Louppe*
- 2020-06-26

[NeRF: Representing Scenes as Neural Radiance Fields for View Synthesis]

- NeRF: Representing Scenes as Neural Radiance Fields for View Synthesis [arXiv]
- *Ben Mildenhall, Pratul P. Srinivasan, Matthew Tancik, Jonathan T. Barron, Ravi Ramamoorthi, Ren Ng*
- 2020-08-03

[Multiplicative Filter Networks]

- Multiplicative Filter Networks [OpenReview]
- *Rizal Fathony, Anit Kumar Sahu, Devin Willmott, J Zico Kolter*
- 2020-09-28

[Learned Initializations for Optimizing Coordinate-Based Neural Representations]

- Learned Initializations for Optimizing Coordinate-Based Neural Representations [arXiv]
- *Matthew Tancik, Ben Mildenhall, Terrance Wang, Divi Schmidt, Pratul P. Srinivasan, Jonathan T. Barron, Ren Ng*
- 2020-12-03

[FastNeRF: High-Fidelity Neural Rendering at 200FPS]

- FastNeRF: High-Fidelity Neural Rendering at 200FPS [arXiv]
- *Stephan J. Garbin, Marek Kowalski, Matthew Johnson, Jamie Shotton, Julien Valentin*
- 2021-03-18

[KiloNeRF: Speeding up Neural Radiance Fields with Thousands of Tiny MLPs]

- KiloNeRF: Speeding up Neural Radiance Fields with Thousands of Tiny MLPs [arXiv]
- *Christian Reiser, Songyou Peng, Yiyi Liao, Andreas Geiger*
- 2021-03-25

[PlenOctrees for Real-time Rendering of Neural Radiance Fields]

- PlenOctrees for Real-time Rendering of Neural Radiance Fields [arXiv]
- *Alex Yu, Ruilong Li, Matthew Tancik, Hao Li, Ren Ng, Angjoo Kanazawa*
- 2021-03-25

[NeRF-: Neural Radiance Fields Without Known Camera Parameters]

- NeRF-: Neural Radiance Fields Without Known Camera Parameters [arXiv]
- *Zirui Wang, Shangzhe Wu, Weidi Xie, Min Chen, Victor Adrian Prisacariu*
- 2021-02-14

[Gromov-Wasserstein Distances between Gaussian Distributions]

- Gromov-Wasserstein Distances between Gaussian Distributions [arXiv]
- *Antoine Salmona, Julie Delon, Agnès Desolneux*
- 2021-08-16

[Plenoxels: Radiance Fields without Neural Networks]

- Plenoxels: Radiance Fields without Neural Networks [arXiv]
- *Alex Yu, Sara Fridovich-Keil, Matthew Tancik, Qinhong Chen, Benjamin Recht, Angjoo Kanazawa*
- 2021-12-09

[InfoNeRF: Ray Entropy Minimization for Few-Shot Neural Volume Rendering]

- InfoNeRF: Ray Entropy Minimization for Few-Shot Neural Volume Rendering [arXiv]
- *Mijeong Kim, Seonguk Seo, Bohyung Han*
- 2021-12-31

[K-Planes: Explicit Radiance Fields in Space, Time, and Appearance]

- K-Planes: Explicit Radiance Fields in Space, Time, and Appearance [arXiv]
- *Sara Fridovich-Keil, Giacomo Meanti, Frederik Warburg, Benjamin Recht, Angjoo Kanazawa*
- 2023-01-24

[FreeNeRF: Improving Few-shot Neural Rendering with Free Frequency Regularization]

- FreeNeRF: Improving Few-shot Neural Rendering with Free Frequency Regularization [arXiv]
- *Jiawei Yang, Marco Pavone, Yue Wang*
- 2023-03-13