

Week 2 tasks

June 23, 2021

1. Implement various types of random vectors (e.g. Gaussian, uniformly sampled from the unit sphere) within the stochastic three point algorithm.
2. Implement a non-sparse quadratic function class within benchmark-functions.py
3. Once you're happy with the stochastic three point code, we should look at implementing it as a class like the other optimizers in optimizers.py
4. Implement a comparison-based version of the gradient-less descent algorithm described in [GKK⁺19] (*This may take more than one week!*)

References

- [GKK⁺19] Daniel Golovin, John Karro, Greg Kochanski, Chansoo Lee, Xingyou Song, and Qiuyi Zhang. Gradientless descent: High-dimensional zeroth-order optimization. *arXiv preprint arXiv:1911.06317*, 2019.