**NeurIPS Hide-and-seek Privacy Challenge documentation questionnaire**

**Team name**

|  |
| --- |
| realHIder |

**Submission filenames(s)**

|  |  |
| --- | --- |
| Hider | Atrin |
| Seeker |  |

**What class of algorithms does your solution belong to?** (e.g. GANs, VAEs, noise-injection, nearest neighbor, etc.)

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| Hider | GANs |
| Seeker |  |

**Describe your algorithm in one sentence** (e.g. “Noise is added to the original data and then this data is returned.”)

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| Hider | TimeGAN with WGAN-GP loss and hyper-parameter tuning. |
| Seeker |  |

**Describe your algorithm in words** (e.g. “Noise is drawn from a Gaussian distribution, with mean 0 and variance s, where the dimension is determined by the size of the dataset. This noise is added to the original data to produce a noisy version of the dataset and this noisy dataset is then returned as the synthetic data.”)

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| Hider | The vanilla GAN loss in TimeGAN is replaced with WGAN-GP loss and all the hyper-parameters are tuned. |
| Seeker |  |

**Specify any loss functions used** (e.g. “No loss functions used.”)

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| Hider | WGAN-GP loss + supervised loss + two moments loss + embedder network MSE loss |
| Seeker |  |

**Specify any hyperparameters and how they are optimized (or preset values)** (e.g. “The noise size, s, is set to 0.1.”)

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| Hider | The batch size, batch\_size, and number of iterations, iterations, are set to 256 and 20000. The number of RNN layers, num\_layer, is set to 3. The hidden dimension, hidden\_dim, of the RNNs is set to 24. The supervised loss coefficient for the generator is set to 100. The supervised loss coefficient for the Embedder network is set to 0.1. The gradient penalty coefficient is set to 10. The G\_loss\_U\_e coefficient, gamma, is set to 1. |
| Seeker |  |

**Specify any pre-trained models used by your algorithm** (e.g. “None.”)

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| Hider | None |
| Seeker |  |

**Pseudo-code for your algorithm**

e.g. **Inputs:** Dataset, D, random seed

**Hyperparameters:** s (default 0.1)

1. Determine dataset dimension: n x d x T

2. Draw N ~ N(0, s), an n x d x T dimensional Gaussian

3. Return D + N

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| Hider | The same as the baseline TimeGAN. |
| Seeker |  |

Finally, alongside this document **please also submit a commented version of your code**. Please include:

- Docstrings for each new class/function defined

- Inline comments for your main function/class

The goal of these comments is to tie the code to the description you have provided here. Please do not alter the actual content of your code - only add comments/docstrings.

**Submitting your documentation and commented code**

Please submit your commented code within a .zip or equivalent file type (1 file per solution), and share it with us as an attachment alongside this Word doc.

You can send these via email (to [nm736@cam.ac.uk](mailto:nm736@cam.ac.uk); [james.jordon@wolfson.ox.ac.uk](mailto:james.jordon@wolfson.ox.ac.uk); [es583@cam.ac.uk](mailto:es583@cam.ac.uk)) or DM James Jordon/Evgeny Saveliev on Slack (you can join the workspace [with this URL](https://join.slack.com/t/hideandseekpr-fbc8582/shared_invite/zt-k2h9xye8-RQNen128uXIG2TRsLa_ppA)).