

Problem Statement -1: GANs

Name of the submitter: **Sridhar K. N. Rao and Lei Huang**

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Host: Anuket-Thoth and China Mobile

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Country: **India and China.**

Title of problem statement: **Synthetic Observability Data Generation using GANs.**

Description of problem statement : Refer to below table

Is data set available? (public/private): **YES. and Public**

Would you offer prizes or incentives for winners of this problem statement? : **In Consideration**

Category	Details
Id	ITU-ML5G-**-*****
Title	Synthetic Observability Data Generation using GANs
Description	<p>Observability data can be any of the following:</p> <ol style="list-style-type: none">1. Telco-Cloud Infrastructure Metrics (servers)<ol style="list-style-type: none">a. H/W Levelb. OS Levelc. Virtualization Level2. Metrics/Statistics from Physical Network Elements.3. Application (virtualized Network functions) Metrics4. System logs (Servers, Applications, etc.)5. Metrics/Statistics from centralized orchestration systems (VIM, SDN-Controller, VNFM, NFVO, etc.)6. Metrics/Statistics from other control-plane services <p>Availability of these data for AI/ML researchers, who are not part of the Telco, is very difficult. To solve this availability issue, one approach is to generate synthetic observability data. In this project, we propose to generate this synthetic observability data using GANs. For this first round only Telco-Cloud Infrastructure Metrics will be considered.</p>
Evaluation criteria	<ol style="list-style-type: none">1. Submission of the GANs implementation as Python (or any other language) program.2. Least error from the discriminator.
Data source	Real-World observability data (Telco-Cloud Infrastructure Metrics) will be provided
Resources	Computing resources can be provided to those who do not have access to one.
Any controls or restrictions	Anything around data, use of the models.
Specification/Paper reference	
Contact	<p>Sridhar K. N. Rao</p> <p>sridharkn@u.nus.edu</p> <p>Lei Huang</p> <p>huangleiyjy@chinamobile.com</p>

Next Steps:

1. Submit the above filled template to Thomas (ITU).
2. ITU will make it publicly available on the registration platform,
3. Introduction Talk - by Sridhar. Tentative date: 22-06-22. (25 or 27)
4. Submit the abstract of the talk (including Bio, Pic), 2 weeks before.

5. Dataset - ITU Platform (if its up to 1 or 2gb) or Github.