# AI/ML data and model sharing

This is a collective workspace for exploring how to apply open source processes to the development of AI/ML models for use in the operations of intelligent networks.

## Ideas on data sharing

#### Ideas on specific use cases to lead the exploration

- If you are an operator or vendor that would like to propose a use case please add it to the table
  If you are an operator or vendor that is interested in one of the listed use cases please add your name to the table together with proposed contributions, if any

Use Case	Description	Interested Developer	Interested Operator
< sample use case>	<in case="" cell="" is="" lightning="" ml="" on="" predict="" strikes="" this="" to="" towers="" use="" used=""></in>	Company 1: <acme inc.=""> Contact person1 : <dr. brown="" emmett=""> Proposed contribution1:<models, algorithms. etc&gt; Company 2: <hooli inc.=""> Contact person2 : <gavin belson=""> Proposed contribution2:<models, algorithms. etc&gt;</models, </gavin></hooli></models, </dr.></acme>	Company 1: <western Union&gt; Contact person 1: &lt; Marty McFly&gt; Proposed contribution 1:<access to<br="">lab, data lake, anonymized data set, etc.&gt;</access></western 
Congestio n Prediction & Mitigation	This use case will demonstrate how AI/ML may be used to predict congestion and perform closed loop automation for executing configuration changes to mitigate.	Company 1: Samsung Contact person 1: Ranny Haiby Proposed contribution 1:O-RAN-SC xApp, n on-RT RIC, rAPP & AI server Company 2: Contact person2 : Proposed contribution2:	
Sleeper Cell Detection	Predict a cell going to "sleep" and handover a critical UE (e.g. ambulance) to another cell.	Company 1: Samsung Contact person 1: Ranny Haiby Proposed contribution 1:O-RAN-SC Non-RT- RIC rApp 2020 October Virtual Technical Event Topic Proposals#2020OctoberVirtualTechnicalEvent TopicProposals=ONAP: A1PolicyenforcementwithNon-RTRIC Company 2: Contact person2 : Proposed contribution2:	
Traffic Ste ering	Improve Quality of Experience (QoE) by steering UE traffic among multiple cells.	Company 1: Samsung Contact person 1: Ranny Haiby Proposed contribution 1:O-RAN-SC xApp Company 2: Contact person2 : Proposed contribution2:	
Soft fault detection and resolution	Detect "soft" faults that are not often caught because they are hidden by the redundant systems. Example, would be faults that bounce for a short time, so are ignored by service assurance. We want to use AI/ML to detect patterns of faults to uncover the ones that might not have an immediate impact on network performance, but will over time as the network degrades.	Company 1: Verizon Contact person 1: Beth Cohen	

Determinis tic Predicti ve capacity planning	Ability to detect usage patterns so that the network can be used more efficiently, don't need to built to peak.	Company 1: Verizon Contact person 1: Beth Cohen	

# Ideas on managing privacy of data and models

• One possibility is looking into federated AI learning. For an example, see: https://github.com/IBM/federated-learning-lib

## **Background data**

Results from the EUAG "Intelligent Networks" survey Data\_All\_210106.pdf

Notes from 17 Feb 2021 EUAG/TAC discussion

Notes from 17 Mar 2021 EUAG/TAC discussion

Telecom Italia Big Data Challenge