

## Analyzing federated learning through an adversarial lens

AN Bhagoji, S Chakraborty, P Mittal... - ... on Machine Learning, 2019 - proceedings.mlr.press

... **Federated learning** distributes model training among a ... In this work, we explore how the **federated learning** setting gives ... Model poisoning is carried out by an **adversary** controlling a ...

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## Poisoning attack in federated learning using generative adversarial nets

J Zhang, J Chen, D Wu, B Chen... - 2019 18th IEEE ..., 2019 - ieeexplore.ieee.org

... However, we notice that the **federated learning** architecture ... act as a benign participant in **federated learning** to upload the ... in **federated learning** system based on generative **adversarial** ...

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## Federated learning in adversarial settings

R Kerkouche, G Ács, C Castelluccia - arXiv preprint arXiv:2010.07808, 2020 - arxiv.org

... **Federated Learning** enables entities to collaboratively **learn** a shared prediction model ... This paper presents a new **federated learning** scheme that provides different trade-offs between ...

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## Threats to federated learning: A survey

L Lyu, H Yu, Q Yang - arXiv preprint arXiv:2003.02133, 2020 - arxiv.org

... Under the malicious setting, an active, or malicious **adversary** tries to **learn** the private states ... This strong **adversary** model allows the **adversary** to conduct particularly devastating attacks...

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## Adversarial training in communication constrained federated learning

D Shah, P Dube, S Chakraborty, A Verma - arXiv preprint arXiv ..., 2021 - arxiv.org

... **Federated learning** enables model training ... **adversarial** examples – designed to elicit misclassification. We study the feasibility of using **adversarial** training (AT) in the **federated learning** ...

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## Federated robustness propagation: Sharing adversarial robustness in federated learning

J Hong, H Wang, Z Wang, J Zhou - 2021 - openreview.net

... a sound solution for centralized **learning**, extending its usage ... we study a novel **learning** setting that propagates **adversarial** ... cannot effectively propagate **adversarial** robustness among ...

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## A robust analysis of adversarial attacks on federated learning environments

AK Nair, ED Raj, J Sahoo - Computer Standards & Interfaces, 2023 - Elsevier

... types, and working in a **Federated Learning** environment in detail. This study will give a precise idea of security issues faced in **Federated Machine Learning** and possible solutions. ...

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## Fairvfl: A fair vertical federated learning framework with contrastive adversarial learning

T Qi, F Wu, C Wu, L Lyu, T Xu, H Liao... - Advances in ..., 2022 - proceedings.neurips.cc

... to be applied in vertical **federated learning**. Different from these methods, we propose a fair vertical **federated learning** framework, which applies **adversarial learning** to improve the ...

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## Delving into the adversarial robustness of federated learning

J Zhang, B Li, C Chen, L Lyu, S Wu, S Ding... - arXiv preprint arXiv ..., 2023 - arxiv.org

... **adversarial** attacks. We first find that directly adopting **adversarial** training in **federated learning** ... We then propose a novel and effective **adversarial** training method called DBFAT, which ...

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## PDGAN: A novel poisoning defense method in **federated learning** using generative adversarial network

Y Zhao, J Chen, J Zhang, D Wu, J Teng... - ... and Architectures for ..., 2020 - Springer

... In **federated learning**, we notice that the poisoning attack can be easily ... of **federated learning** and generative **adversarial** nets. The overview of the poisoning attack in **federated learning** ...

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