Privacy-preserving Predictive Modeling in a Federated Setting

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Privacy is emerging as a global social issue and data privacy issues are also raised accordingly. Researchers, funders, and the general public continue to be concerned about potential privacy leakages of personal data during data sharing, even though scientific collaborations are essential to securing as much data as possible for advanced data analysis. To address this aspect, we present a privacy-preserving predictive modeling platform in a federated setting. Without sharing person-level information, the platform allows people to enjoy accurate modeling on distributed data as much as they are in one place, and multiple scenarios that are difficult to utilize with each local data alone. The proposed framework will be a useful alternative for accurate prediction tasks, to federate distributed data while preserving privacy.