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Differential Privacy using PyDP

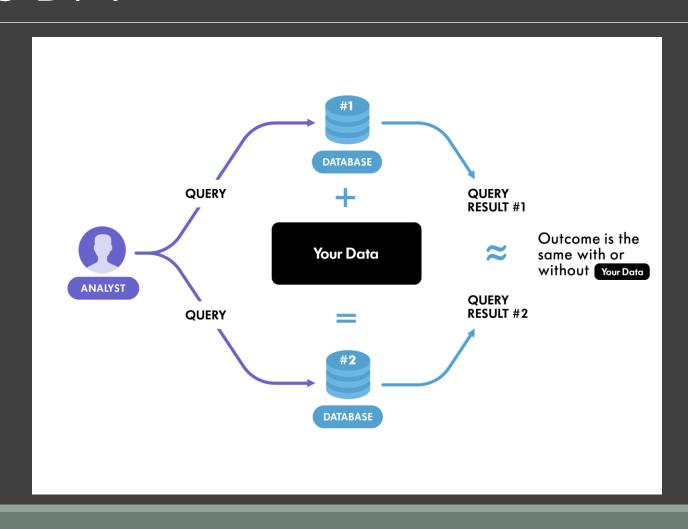
Chinmay Shah

PyDP Team Lead

Material

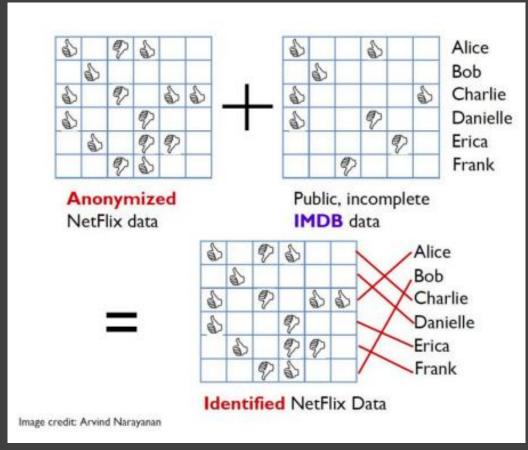
Code: github.com/chinmayshah99/pricon20

What is DP?



Why DP

The Netflix Prize fiasco



Source: CS 860: Algorithms for Private Data Analysis by Prof. Gautam Kamath

What DP means in the current context?

Imagine you have a huge dataset.

In the current privacy context (GDPR), imagine a person opts out from data collection

We have to remove him from training our new models or use in our normal statistics

In the previous system, removing the datapoint would alter the dataset and the model may change.

PyDP

Python Differential Privacy Package build at OpenMined.

PyPI Package for Linux, OSX and Windows: pip install python-dp

Docker Hub: https://hub.docker.com/r/openmined/pydp

35+ contributors

13k+ downloads on PyPI

Supports Google's Differential Privacy Library

Documentation at pydp.readthedocs.org

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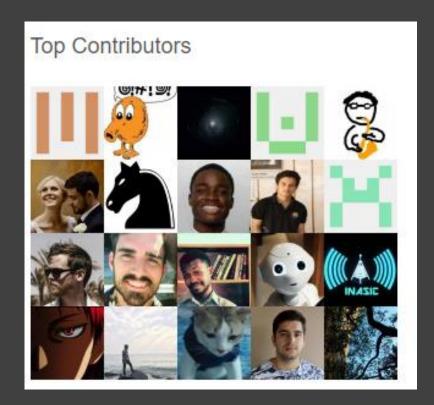
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Tutorial

Code: github.com/chinmayshah99/pricon20

One-Stop for Differential Privacy



(Laplacian, Gaussian, etc.)

Database

(ex. Postgres, MS SQL, MongoDB)

PyDP

Machine Learning & Deep Learning

ETL

(Extraction, Transformation, Loading)

(Apache Beam, etc.)

Contact Me

Contact Me:

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https://github.com/OpenMined/PyDP or Documentation

Slack: openmined.slack.com

- #lib_pydp
- #code_dp_python

Questions?