1. **What is federated learning?**

In this approach we can train deep learning model in a privacy conscious fashion with many decentralized stream of data.

That means no need to pull user data to centralized place because it involves privacy and then train the model.

General idea of FL is maintain a master model and update this master model using many small updates from individual devices.

1. **Important points on federated learning?**
2. It is suitable for mobile phones.
3. no training data is exchanged and hence privacy of user is maintained
4. **Federated Averaging algorithm?**
5. Construct some master model with weights w.
6. Download your master model to each of your clients.
7. Take some subset of your clients (e.g., mobile phones). For each client, compute a updated, personalized set of weights wk using local training data — this is done in parallel and offline.
8. Now, update w with the weighted average of all wk.
9. (Return to step #2)