Congratulations! You passed!

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Go to next item

1. What advantage does Federated Learning give you? **1 / 1 point**

- ○ User data can remain private on their device but still be used to train models
- ○ Users can have models trained on everybody's data
- ○ Models can be frequently updated
- ◉ All of the above

Correct

2. What is the privacy principle of focused collection? **1 / 1 point**

- ◉ Devices report only the data needed for a specific computation
- ○ Engineer filters all the data to get only what she needs for a calculation
- ○ Devices filter all the data from the server to only use updates
- ○ Data is filtered by the network to remove all irrelevant data

Correct

3. What is secure aggregation? **1 / 1 point**

- ○ Data is aggregated on the device before sending to the server, and sent on an encrypted channel
- ○ Data is aggregated before being sent to the server, and only sent on encrypted channels
- ○ Devices in a network pair up, and aggregate mutual data before sending to the server
- ◉ Devices in a network pair up, and create obfuscation keys that get cancelled out when aggregated on the server

Correct

4. TensorFlow Federated includes a Federated Learning API, a Federated Core API and a runtime for simulations. What's the role of the Federated Learning API? **1 / 1 point**

- ○ It is a mobile runtime for Federated Learning
- ○ It's designed to allow the expression of new Federated algorithms
- ○ It is the API for everything Federated Learning
- ◉ It contains implementations of federated training that can be applied to existing tensorflow models and data

Correct

5. If you want to declare a federated type, where a numeric item of data is available across all your devices, how do you do it? **0 / 1 point**

- ◉ You can't do this for privacy reasons, you have to declare it when submitting to the server
- ○ You declare the type as {float32}@server
- ○ You declare the type as {float32}@clients
- ○ Each device needs the same variable name and type

Incorrect

6. If you want to do a federated computation on the server, what do you need to do to your computation function? **1 / 1 point**

- ◉ Attribute the function with @tff.federated_computation
- ○ Attribute the function with @federated
- ○ Nothing, it will just work automatically
- ○ Make sure it returns its value to @Clients

Correct

7. You want to return a mean value of client values, calculated on the server, back to the clients. How do you do this? **1 / 1 point**

- ◉ You have to use a tff.federated_mean to calculate the value and return its results
- ○ The return value from your function is automatically mapped to the clients
- ○ You can't do this for privacy reasons
- ○ You have to explicitly open a network pipe and send the value to all of the clients using it

Correct

8. If you want to try the tensorflow federated APIs, how do you install them for Python? **1 / 1 point**

- ○ Pip install tf-federated
- ◉ Pip install tensorflow-federated
- ○ Do nothing, they're included in TensorFlow
- ○ Pip install tensorflow_federated

Correct