Mô hình:

A diagram of a computer

Description automatically generated

Model: "LeNet5"

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Layer (type) Output Shape Param #

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conv2d\_2 (Conv2D) (None, 24, 24, 6) 156

max\_pooling2d\_2 (MaxPoolin (None, 12, 12, 6) 0

g2D)

conv2d\_3 (Conv2D) (None, 8, 8, 16) 2416

max\_pooling2d\_3 (MaxPoolin (None, 4, 4, 16) 0

g2D)

flatten\_1 (Flatten) (None, 256) 0

dense\_3 (Dense) (None, 120) 30840

dropout\_2 (Dropout) (None, 120) 0

dense\_4 (Dense) (None, 84) 10164

dropout\_3 (Dropout) (None, 84) 0

dense\_5 (Dense) (None, 10) 850

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Total params: 44426 (173.54 KB)

Trainable params: 44426 (173.54 KB)

Non-trainable params: 0 (0.00 Byte)

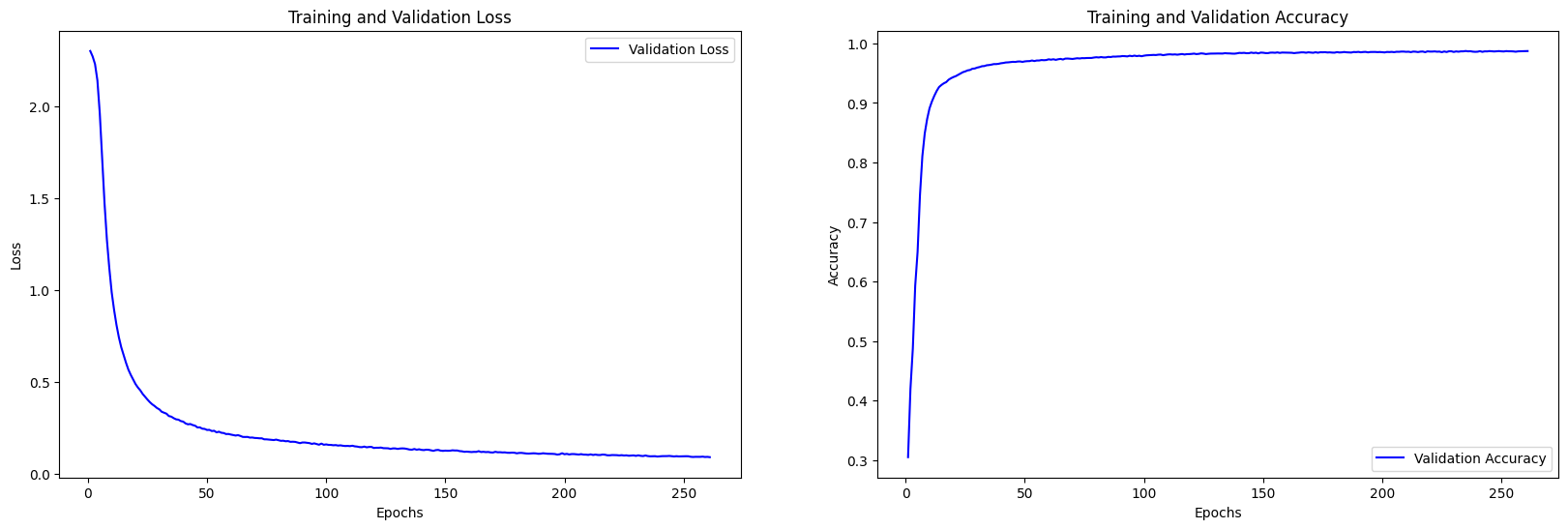
Hyperparameters:

* SGD
* Lr= 0.001
* Loss = sparse\_categorical\_crossentropy
* Batch size = 64

Config FL:

* 40 client
* Chọn 12 client mỗi round

Centrailized Results



Accuracy: 0.9872

Alpha = 1

FedAvg với epoch = 1

FedAvg khác epoch

FedImp với epoch = 1

FedImp khác epoch

Proposed Algorithm

Alpha = 50

Alpha = 100