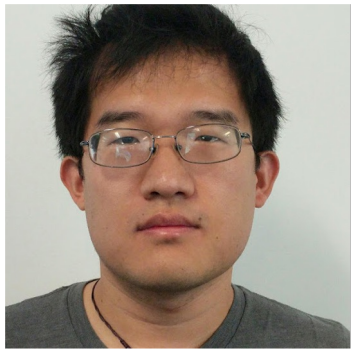
Improving Generalization Capability of Pre-trained Model

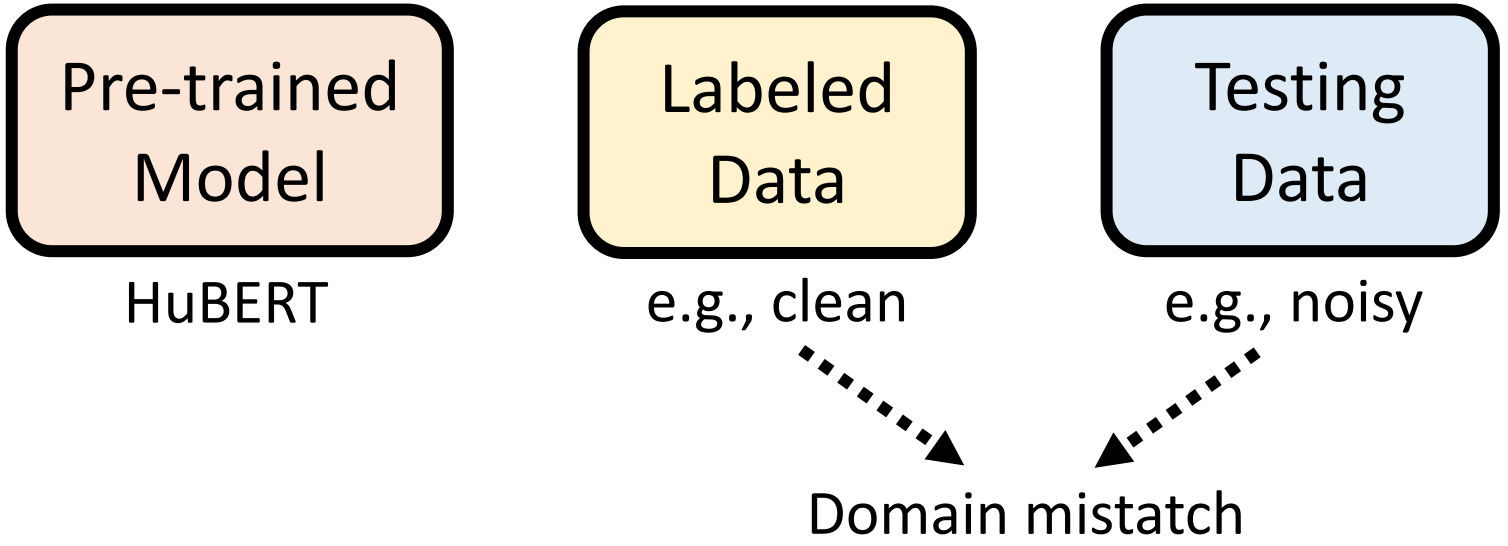
Kuan-Po Huang



Yu Zhang

Hung-yi Lee

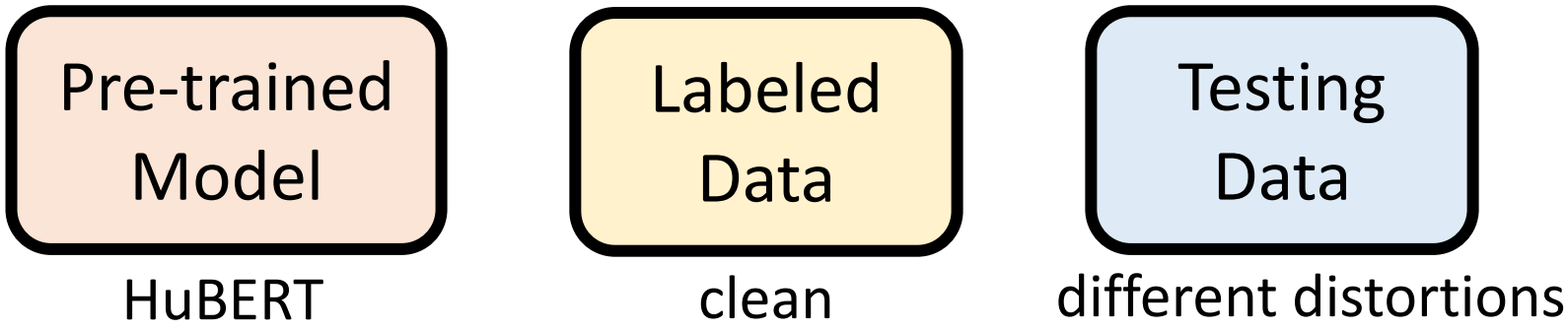
Generalization Capability of Pre-trained Model



Different domains: speech distortions, speaking styles (read vs. spontaneous), accents/dialects, languages

Focus on speech distortion at the preliminary stage

https://arxiv.org/abs/2203.16104



	Intent Classification ↑			Emotion Recognition ↑			Keyword Spotting ↑		
Testing Data	clean	m+g+r	fsd50k	clean	m+g+r	fsd50k	clean	m+g+r	Fsd50k
HuBERT	99.47	96.94	97.47	63.96	57.33	60.55	97.14	93.87	93.80

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m+g+r = Musan + Gaussian + reverberation

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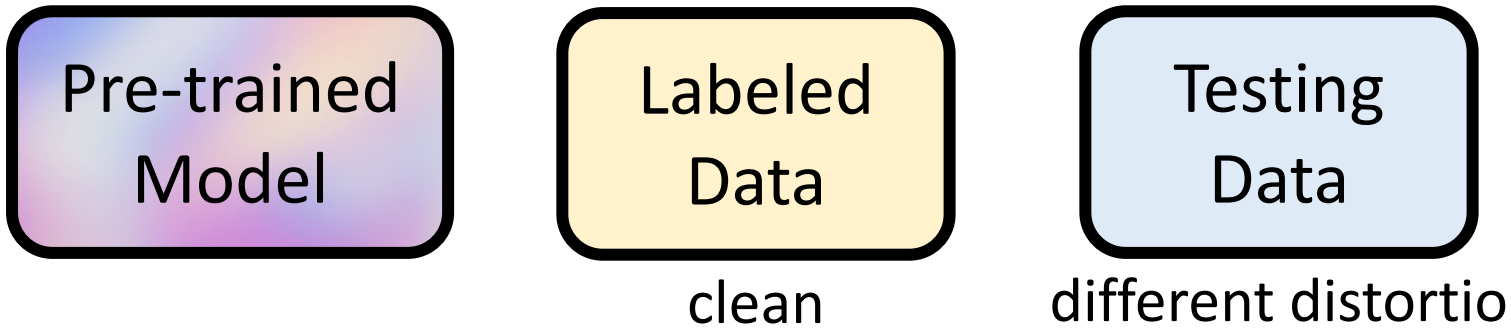
Continuously train with noisy data (m+g+r)



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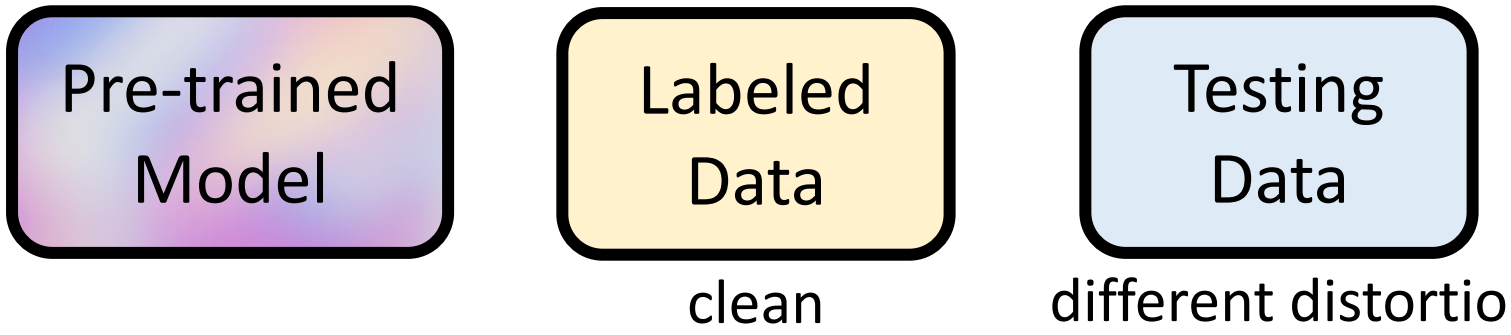

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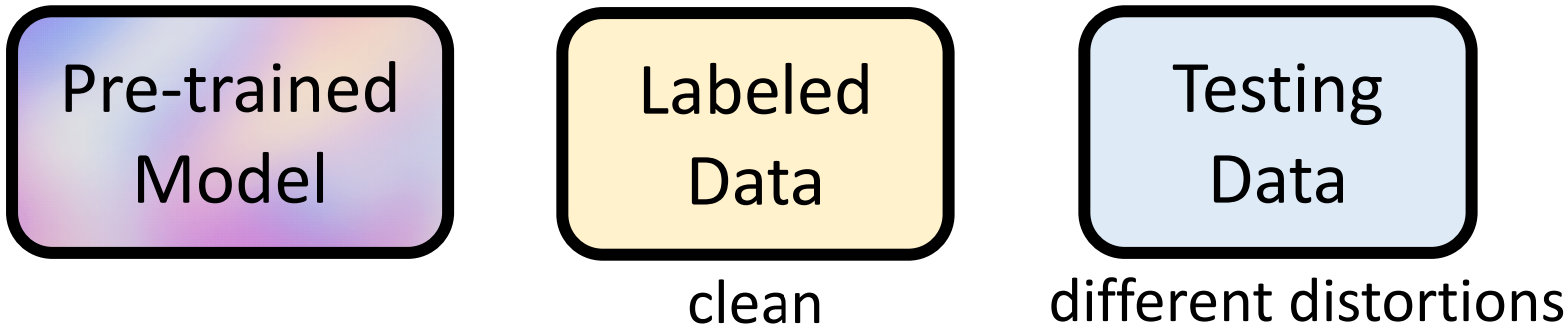

Now you can use the model via S3PRL

```
model = torch.hub.load("s3prl/s3prl", "hubert_base_robust_mgr")
```

Goal: Give us a pre-trained model (compressed, visual enhanced, etc.), we make it more robust.