Environment Setup

Image size: 384*384

backbone: https://github.com/jeonsworld/ViT-pytorch

model: ViT-B_16

evaluate code: https://colab.research.google.com/drive/1v_e11ra8cbTz99MsVXvSyzWerMPD-B9n?usp=sharing

root path: '/content/drive/MyDrive/12_03_2565/ViT-pytorch-main/ViT-pytorch-main/'

root path: '/content/drive/MyDrive/12_03_2565/ViTpytorch_v2/'

classes: {0:'angry', 1:'happy', 2:'neutral', 3:'relax', 4:'sad'}

Skip: 5 frames

Data path: '/content/drive/MyDrive/data/'

Dataset: MU dataset (label แบบภาพรวมไม่ได้มองแค่ face)

Train code: ViT-pytorch-main#1.ipynb

       https://colab.research.google.com/drive/15n2aLQPicCSshOXbLlO-xCDPhe0OAoqR?usp=sharing

Train code: ViT-pytorch-main#2.ipynb

       https://colab.research.google.com/drive/10ZcA_l50iNftl__kVPI1YC6Wfxz2IPR9?usp=sharing

Test: anger video

Train: happy+relax+sad+stress video
Test: anger video
x_test shape: (5812, 384, 384, 3) y_test: (5812,)
model name: h_r_sa_st-ViT-B_16-finetune-384
balance: N

Train: happy+relax+sad+stress video
Test: anger video
x_test shape: (5812, 384, 384, 3) y_test: (5812,)
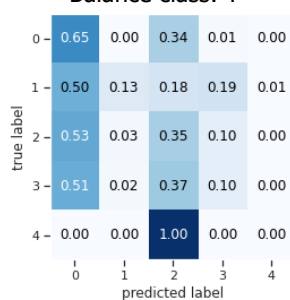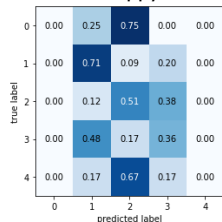model name: h_r_sa_st-ViT-B_16-finetune-384
balance: Y

anger_session_talk_x_skip5frame
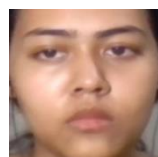
Sample face
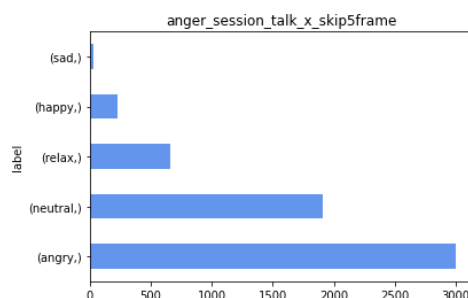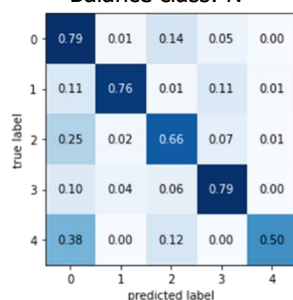
Balance class: N

Balance class: Y

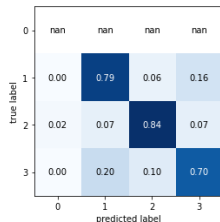| | Train | Validate | F1/acc Test |
| | | | 0.6/0.74 |

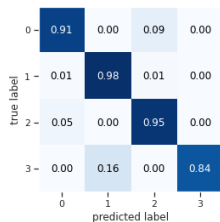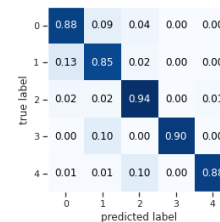| | Train | Validate | F1/acc Test |
| | | | 0.16/0.24 |

Happy
Test F1/acc = 0.28/0.57

relax
Test F1/acc = 0.56/0.81
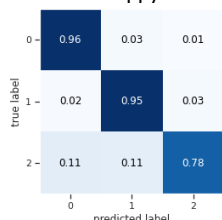
sad
Test F1/acc = 0.92/0.95
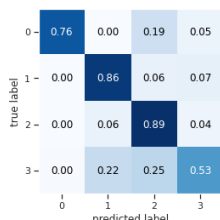
stress
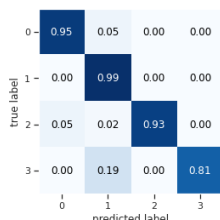Test F1/acc = 0.90/0.88
Train on Balance class: N
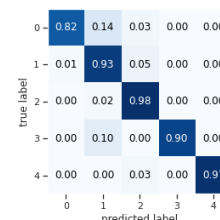
Happy
Test F1/acc = 0.89/0.89

relax
Test F1/acc = 0.75/0.80
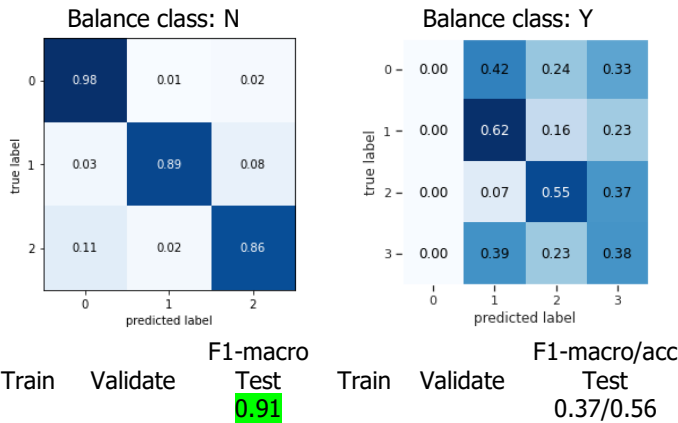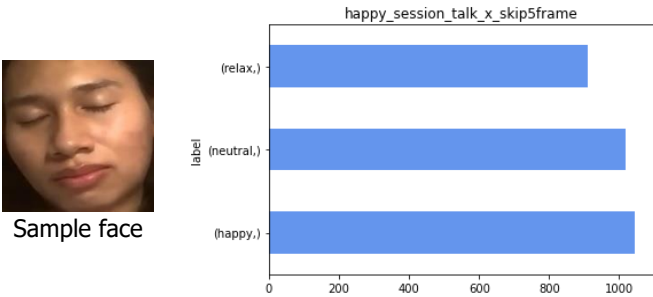
sad
Test F1/acc = 0.94/0.96

stress
Test F1/acc = 0.93/0.91
Train on Balance class: Y

Test: happy video

Train: anger+relax+sad+stress video
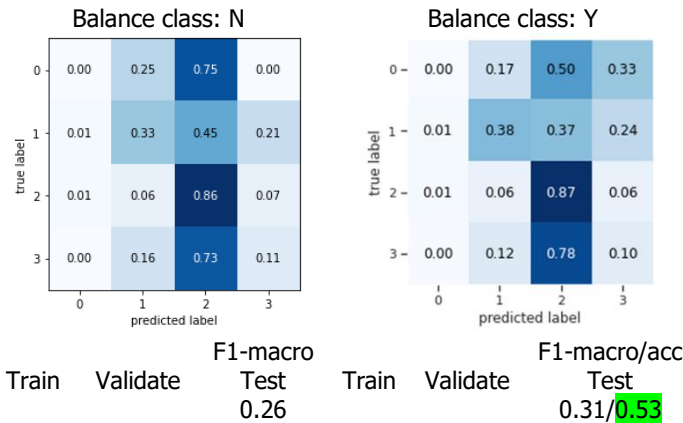Test: happy video
model name:
balance: N

Train: anger+relax+sad+stress video
Test: happy video
model name:
balance: Y

happy_session_talk_x_skip5frame

Sample face

Balance class: N

Balance class: Y

	F1-macro				F1-macro/acc
Train	Validate	Test	Train	Validate	Test
		0.91			0.37/0.56

Test: relax video

Train: anger+happy+sad+stress video
Test: relax video
model name:
balance: N

Train: anger+happy+sad+stress video
Test: relax video
model name:
balance: Y

relax_session_talk_x_skip5frame

Sample face

Balance class: N

Balance class: Y

	F1-macro				F1-macro/acc
Train	Validate	Test	Train	Validate	Test
		0.26			0.31/0.53
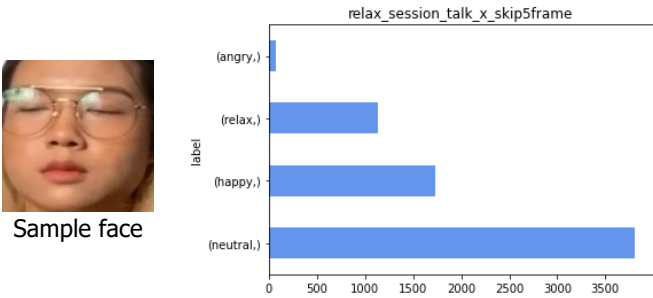
Test: sad video

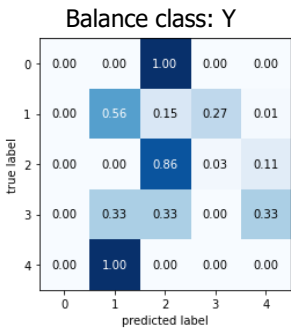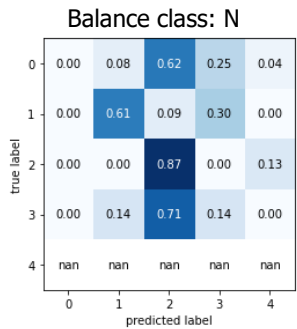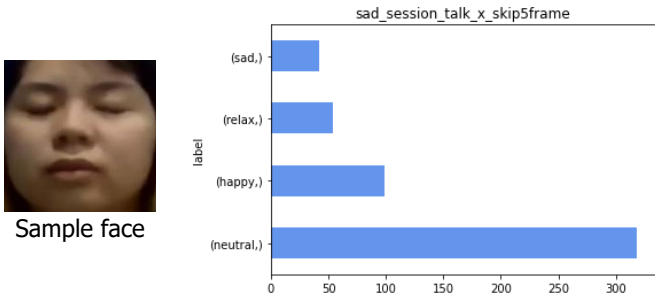Train: anger+happy+relax+stress video
Test: sad video
model name:
balance: N

Train: anger+happy+relax+stress video
Test: sad video
model name:
balance: Y

sad_session_talk_x_skip5frame

Sample face

Balance class: N

Balance class: Y

	Train	Validate	F1-macro Test
			0.33

	Train	Validate	F1-macro/acc Test
			0.32/0.75

Test: stress video

Train: anger+happy+relax+sad video
Test: stress video
model name:
balance: N

Train: anger+happy+relax+sad video
Test: stress video
model name:
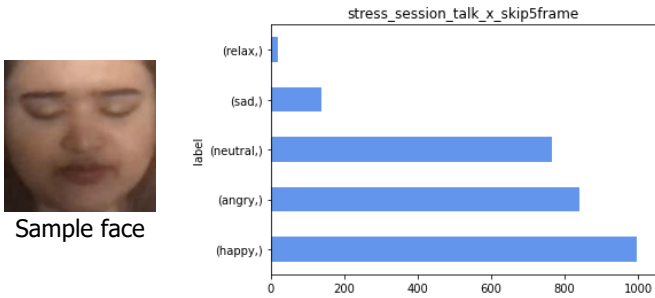balance: Y

stress_session_talk_x_skip5frame

Sample face

Balance class: N

Balance class: Y
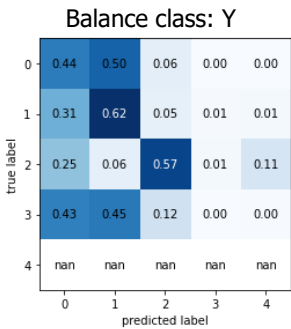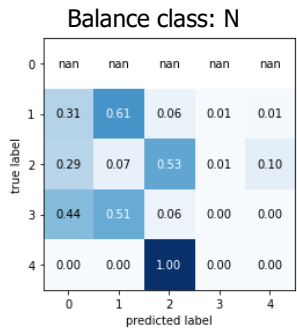
	Train	Validate	F1-macro Test
			0.28

	Train	Validate	F1-macro/acc Test
			0.27/0.51

Ref

CNN_Res50_train_update_11042656.ipynb

https://colab.research.google.com/drive/1ciYNnfNEIJ5oRX6UAVtJ20YYDNxLVBmb?usp=sharing

Copy of CNN_Res50_train_update_11042656.ipynb

https://colab.research.google.com/drive/11h4JBGOm-n6z6qyRiIjT3rPn7eMYDvqH?usp=sharing

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https://colab.research.google.com/drive/1Ra4f8Ae9Q0TFcyTyOuzqejZeqEoynBp2?usp=sharing

Copy of visualize_attention_map (1).ipynb

https://colab.research.google.com/drive/1IgJEEVwsRvC9BkaeVrvgT2tIbj7nulDt?usp=sharing

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https://colab.research.google.com/drive/1pH0JOj56_BotmQHanoNkBqKyV4zlhkmE?usp=sharing

Copy of Copy of Copy of visualize_attention_map (1).ipynb

https://colab.research.google.com/drive/1ZdTW1E6-zDE3pwwlrRHec2cHy21GKrap?usp=sharing