

- dynamic 추가 방법

1. 피아노 0.1초마다 note_on_status 값을 추출한다.
2. 0.1 초에 해당하는 note_on 항목 중 velocity의 최대 값에 기반해 기호를 추출함.

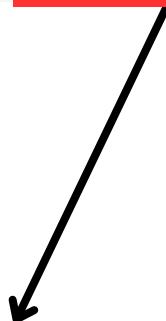
```
input_file_note_status = [[{'note': x}, {'status': False}, {'velocity': 0}] for x in range(128)]  
target_file_note_status = [[{'note': x}, {'status': False}, {'velocity': 0}] for x in range(128)]
```

```
for velocity in velocity_list:  
    # 최대값 찾기  
    if max_velocity < velocity[1]['velocity']:  
        max_velocity = velocity[1]['velocity']  
dynamic = distribute_dynamic(max_velocity)  
input_dynamic_list.append(dynamic)
```

```
def distribute_dynamic(mean_velocity):  
    """  
    velocity에 따른 dynamic 기호 추출  
    """  
    dynamic = ''  
    if 0 <= mean_velocity < 36:  
        dynamic = 'ppp'  
    elif 36 <= mean_velocity < 49:  
        dynamic = 'pp'  
    elif 49 <= mean_velocity < 62:  
        dynamic = 'p'  
    elif 62 <= mean_velocity < 75:  
        dynamic = 'mp'  
    elif 75 <= mean_velocity < 88:  
        dynamic = 'mf'  
    elif 88 <= mean_velocity < 101:  
        dynamic = 'f'  
    elif 101 <= mean_velocity < 114:  
        dynamic = 'ff'  
    elif 114 <= mean_velocity <= 127:  
        dynamic = 'fff'  
  
    return dynamic
```

new_dynamic 컬럼 추가하기 : 결과

	sec	msg_type	channel	note	velocity	dynamic	accent	count	main_vol	depth	pedal	pan
0	0.0					ppp	0	0	100	0	0	0
1	0.1	['note_on', 'note_on']	[0, 0]	[60, 60]	[21, 21]	ppp	0	2	0	0	0	0
2	0.2					NaN	0	0	0	0	0	0
3	0.3	['note_on', 'note_on']	[0, 0]	[64, 64]	[32, 32]	ppp	0	2	0	0	0	0
4	0.4					NaN	0	0	0	0	0	0



	sec	msg_type	channel	note	velocity	new_dynamic	dynamic	accent	count	main_vol	depth	pedal	pan
0	0.0					ppp	ppp	0	0	100	0	0	0
1	0.1	['note_on', 'note_on']	[0, 0]	[60, 60]	[21, 21]	ppp	ppp	0	2	0	0	0	0
2	0.2					ppp	NaN	0	0	0	0	0	0
3	0.3	['note_on', 'note_on']	[0, 0]	[64, 64]	[32, 32]	ppp	ppp	0	2	0	0	0	0
4	0.4					ppp	NaN	0	0	0	0	0	0