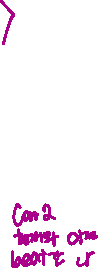
**논문 읽기**



**Morphological features**



Using the QRS summits (after normalization), the maximum of cross-correlation function between each detected beat and the following beat was calculated, as well as the maximum of cross-correlation between the current beat and the previous beat detected, called respectively Corr1 and Corr2 [[17](https://journalofbigdata.springeropen.com/articles/10.1186/s40537-019-0244-x#ref-CR17)]. Another feature was the maximum of cross-correlation between a template of normal beat, with each QRS complex detected, called CxyCxy, was computed. For each record, the template was calculated as the averaged beat of a sequence of many normal sinus beats.

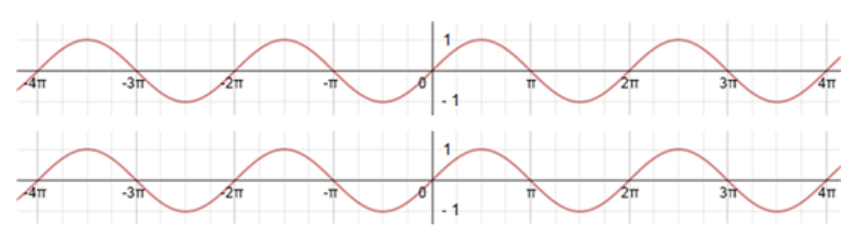


**Cross Correlation**

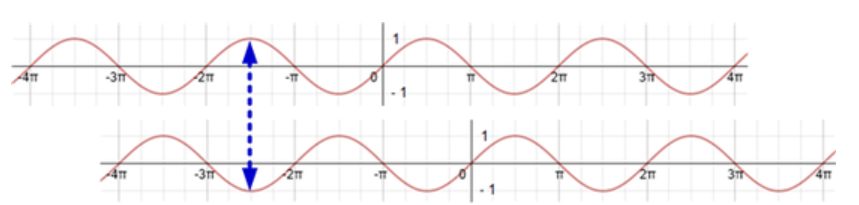


➡ 신호가 비슷하다면 큰 값!

ex)



위 그림과 같이 동일한 sine함수이면 CorrCoef(상관계수) = 1



위 그림과 같이 정 반대인 경우 CorrCoef = -1

numpy로 cross correlation구하기 기초

[깃허브 코드 보기](https://github.com/i-zro/IS/blob/main/Cross%20Correlation.ipynb)

➡ One Note 정리

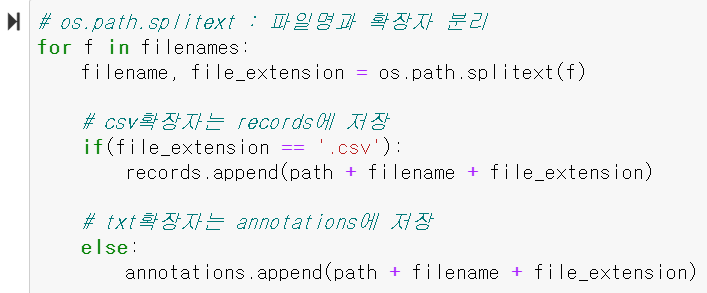
[Cross Correlation](onenote:https://d.docs.live.net/29ded1d89385efb2/문서/나영의%20전자%20필기장/개별연구.one#Cross%20Correlation&section-id={4347E79B-F620-4DEC-AF80-42FC0124E90A}&page-id={A88B9B41-E364-4F4C-BF09-0CB65D96447A}&end)  ([웹 보기](https://onedrive.live.com/view.aspx?resid=29DED1D89385EFB2%21526&id=documents&wd=target%28%EA%B0%9C%EB%B3%84%EC%97%B0%EA%B5%AC.one%7C4347E79B-F620-4DEC-AF80-42FC0124E90A%2FCross%20Correlation%7CA88B9B41-E364-4F4C-BF09-0CB65D96447A%2F%29))



csv파일들 불러와서 정리하기

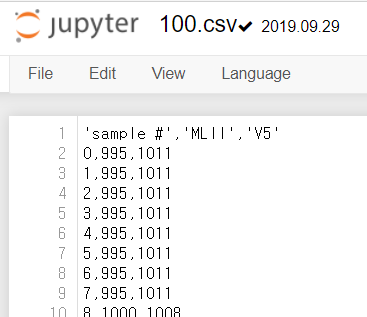




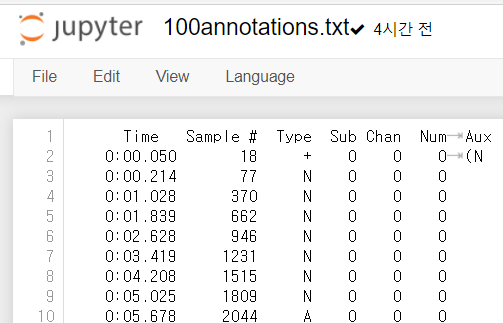






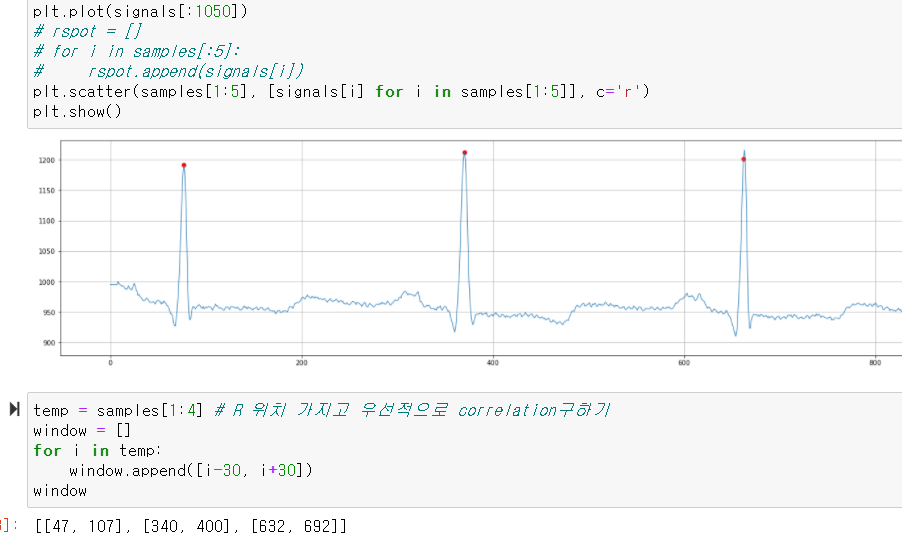








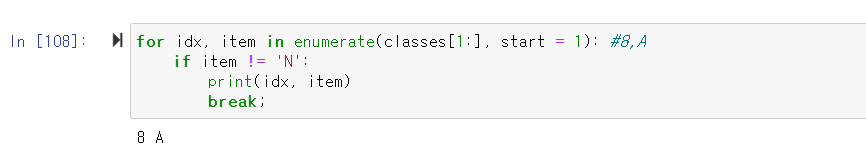
3개의 beat로 corrcoef 구하기

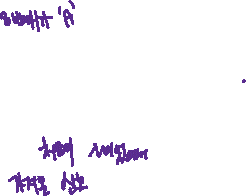


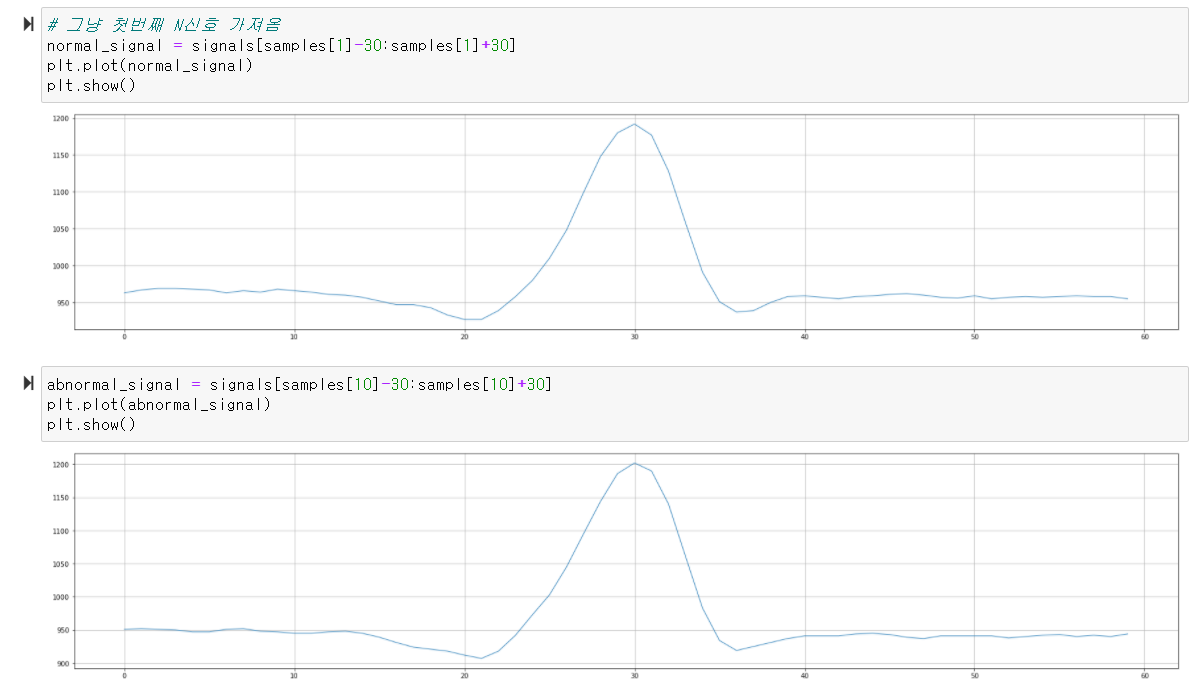




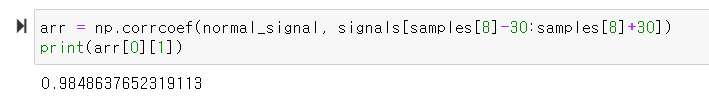














beat별 분류클래스

