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function [VFilt, vInt, locs] = HR_Detect(V, sampleRate, filterObj)

VFilt = filtfilt(filterObj,V); % applying second filter to voltage

%gradient command to derive the vFilt2 and time
dV = gradient(VFilt,(1/sampleRate));
dV2 = dV.^2;%square the derivative

hInt = 1/sampleRate;%rolling integration
kInt = ones(1 , (sampleRate*0.05))*hInt;
kInt(1) = hInt*0.5; %first element is 0.5
kInt(end) = hInt*0.5;%last element is 0.5

vInt = conv(dV2,kInt,'same');%conv kInt and derivative squared

MPH = 2*mean(vInt); %taking the mean of kernal
MPD = sampleRate*0.27;
[~,locs] = findpeaks(vInt,'MinPeakHeight',MPH,'MinPeakDistance',MPD);

end
```

```
Not enough input arguments.

Error in HR_Detect (line 3)
VFilt = filtfilt(filterObj,V); % applying second filter to voltage
```

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