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# MATLAB programming course for beginners, supported by Wagatsuma Lab@Kyutech

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## Specifications and requirements

1. @Time : 2020-4-20
2. @Author : Hiroaki Wagatsuma
3. @Site : [https://github.com/hirowgit/1\\_matlab\\_basic\\_course](https://github.com/hirowgit/1_matlab_basic_course)
4. @IDE : MATLAB R2018a
5. @File : lec1\_step65.m

## Main program

```
dt=0.01; noise_level=0.1;
t=0:dt:2*pi;
dataUpper=noise_level.*rand(1,length(t));
dataUpDown=noise_level.*(rand(1,length(t)).*2-1);

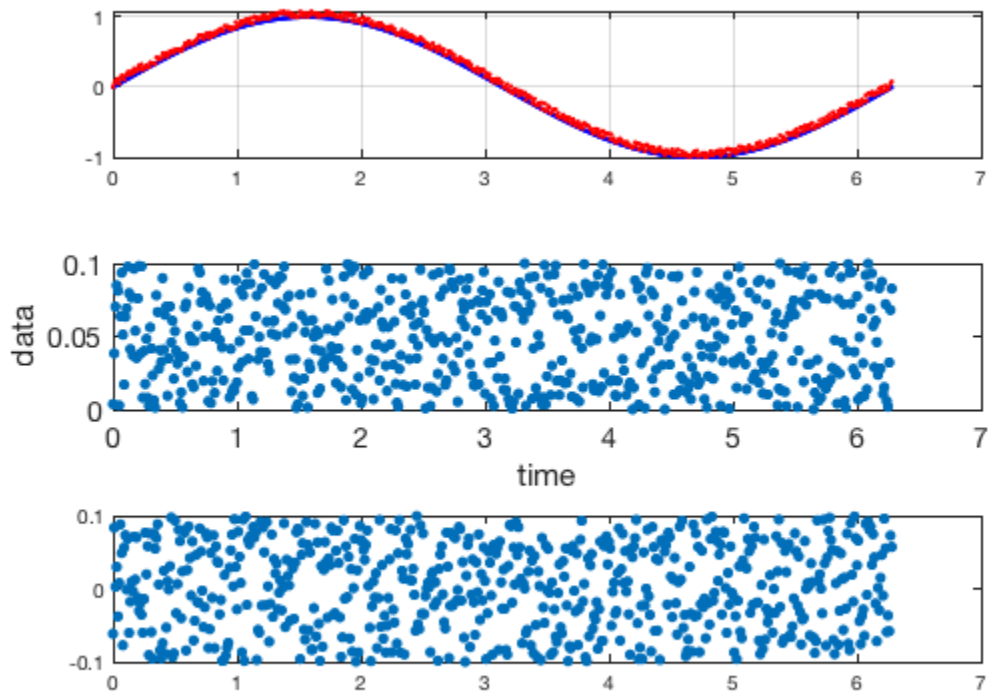
figure(1); clf;
subplot(3,1,1);
```

```
plot(t,sin(t),'b.-'), hold on;

plot(t,dataUpper+sin(t),'r. ');
grid on;

subplot(3,1,2);
% figure(3); clf;
plot(t,dataUpper, '.', 'MarkerSize',15);
ylabel('data','FontSize',14);
xlabel('time','FontSize',14);
set(gca,'ylim',[0 noise_level],'FontSize',14,'Color',[1 1
0],'FontName','Helvetica');

subplot(3,1,3);
% figure(3); clf;
plot(t,dataUpDown, '.', 'MarkerSize',15);
```



## Supplementary information to publish

If you want to make a pdf or html file on the code, you can use the code "x\_publish\_each\_codes.m" in the same folder. Please change the file name as "this\_file\_tag='lec\*\_step\*' " (\* will be replaced to the number of the target file).

The code "x\_publish\_all\_codes.m" works for such a publication applying to all codes in the same folder (Note: "x\_publish\_all\_codes\_sub.m" should be located in the same folder).

*Published with MATLAB® R2018a*