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```
function [time,voltage] = Ma3_PA_Task1_photon_data_will2051()  
  
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%  
% ENGR 133  
% Program Description  
% Reads photon data from a text file and outputs a Voltage vs Time  
% plot  
% and the number of photons and times the photons are detected  
%  
% Function Call  
% Ma3_PA_Task1_photon_data_will2051()  
%  
% Input Arguments  
% Void  
%  
% Output Arguments  
% time - array of time values in milliseconds  
% voltage - array of voltage values  
%  
% Assignment Information  
% Assignment:      Ma3_PA Task 1 data  
% Author:         Zach Williams, will2051@purdue.edu  
% Team ID:        001-01  
% Contributor:     Name, login@purdue [repeat for each]  
% My contributor(s) helped me:  
%   [ ] understand the assignment expectations without  
%       telling me how they will approach it.  
%   [ ] understand different ways to think about a solution  
%       without helping me plan my solution.  
%   [ ] think through the meaning of a specific error or  
%       bug present in my code without looking at my code.  
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
```

---

## INITIALIZATION

```
data = load("Ma3_PA_Task1_photon.txt");  
time = data(:,1);  
voltage = data(:,2);
```

---

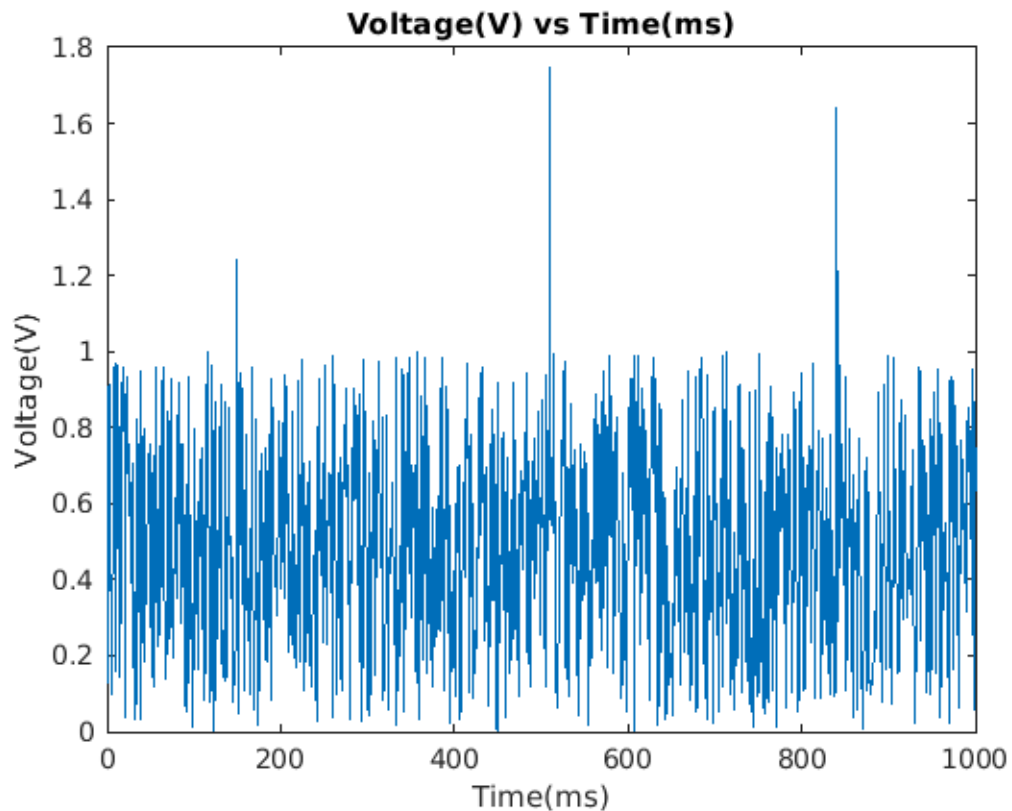
## CALCULATIONS

```
[numPhot,times] = Ma3_PA_Task1_number_photon_will2051(time,voltage);
```

---

## FORMATTED TEXT & FIGURE DISPLAYS

```
Ma3_PA_Task1_signal_plot_will2051(time,voltage);
```



---

## COMMAND WINDOW OUTPUT

```
fprintf("Number of Photons Detected: %d\n", numPhot);  
fprintf("Times Photons are Detected: %d\n", times);
```

```
Number of Photons Detected: 3  
Times Photons are Detected: 150  
Times Photons are Detected: 510  
Times Photons are Detected: 840
```

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ans =
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## ACADEMIC INTEGRITY STATEMENT

I have not used source code obtained from any other unauthorized source, either modified or unmodified.  
Neither have I provided access to my code to another. The project I am submitting is my own original work.

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*Published with MATLAB® R2019b*