## Contents



## NPS for flight line 1

```
% Load Lidar data from CSV file
lidar_data = csvread('Tests_sites1.csv', 1, 0); % Skip the first row

% Calculate distance between neighboring points
distances = sqrt(sum(diff(lidar_data(:,1:3)).^2, 2));

% Calculate average distance between neighboring points
avg_distances = movmean(distances, 2, 'omitnan');

% Sort average distances in descending order
sorted_avg_distances = sort(avg_distances, 'descend');

% Calculate top 5% threshold
top_5_percent_threshold = prctile(sorted_avg_distances, 95);

% Find NPS
nps = sorted_avg_distances(sorted_avg_distances >= top_5_percent_threshold);
%nps = nps(1); % Take the first value since it's in descending order

disp(['Nominal Pulse Spacing (NPS) for flight line 1: ', num2str(top_5_percent_threshold)]);
```

## NPS for flight line 2

```
% Load Lidar data from CSV file
lidar_data = csvread('Tests_sites2.csv', 1, 0); % Skip the first row

% Calculate distance between neighboring points
distances = sqrt(sum(diff(lidar_data(:,1:3)).^2, 2));

% Calculate average distance between neighboring points
avg_distances = movmean(distances, 2, 'omitnan');

% Sort average distances in descending order
sorted_avg_distances = sort(avg_distances, 'descend');

% Calculate top 5% threshold
top_5_percent_threshold = prctile(sorted_avg_distances, 95);

% Find NPS
nps = sorted_avg_distances(sorted_avg_distances >= top_5_percent_threshold);
nps = nps(1); % Take the first value since it's in descending order

disp(['Nominal Pulse Spacing (NPS) for flight line 2: ', num2str(top_5_percent_threshold)]);
```

*Published with MATLAB® R2023b*