Cody Problem 31. Remove all the words that end with "ain"

Given the string s1, return the string s2 with the target characters removed.

For example, given

```
%  s1 = 'the main event'
%  s1 = 'The rain in Spain falls mainly on the plain';
%  s1 = 'The pain from my migraine makes me complain';
%  s1 = 'I had to explain that "ain" is not a word';
```

your code would return

```
%  s2 = 'the  event'
%  s2 = 'The  in  falls mainly on the ';
%  s2 = 'The  from my migraine makes me ';
%  s2 = 'I had to  that "" is not a word';
```

Scratch Pad

```
s1 = 'the main event';
s2 = 'the  event';
remAin(s1)
```

```
ans =
'the  event'
```

```
assert(strcmp(remAin(s1),s2));

s1 = 'The rain in Spain falls mainly on the plain';
s2 = 'The  in  falls mainly on the ';
remAin(s1)
```

```
ans =
'The  in  falls mainly on the '
```

```
assert(strcmp(remAin(s1),s2));

s1 = 'The pain from my migraine makes me complain';
s2 = 'The  from my migraine makes me ';
remAin(s1)
```

```
ans =
'The  from my migraine makes me '
```

```
assert(strcmp(remAin(s1),s2));

s1 = 'I had to explain that "ain" is not a word';
s2 = 'I had to  that "" is not a word';
remAin(s1)
```

```
ans =
```

```
'I had to  that "" is not a word'
```

```
assert(strcmp(remAin(s1),s2));
```

Solution

```
function s2 = remAin(s1)
    % Split the string into words and extract punctuation
    word_list = regexp(s1, '(\w+)([^\w]*)', 'tokens');
    word_list = vertcat(word_list{:}); % Flatten the cell array

    % Initialize a cell array for the output
    new_word_list = {};

    % Loop through each word and punctuation pair
    for i = 1:size(word_list, 1)
        word = word_list{i, 1};
        punctuation = word_list{i, 2};

        % Check if the word ends with 'ain' and retain only punctuation if
it does
        if endsWith(word, 'ain')
            new_word_list{end+1} = punctuation;
        else
            new_word_list{end+1} = [word punctuation];
        end
    end

    % Join the modified list into a string
    s2 = strjoin(new_word_list, '');
end
```