Also surprisingly, the 80-year-old women seem to outperform *everyone* in terms of their split time. This is probably due to the fact that we're estimating the distribution from small numbers, as there are only a handful of runners in that range:

```
In[38]: (data.age > 80).sum()

Out[38]: 7
```

Back to the men with negative splits: who are these runners? Does this split fraction correlate with finishing quickly? We can plot this very easily. We'll use `regplot`, which will automatically fit a linear regression to the data (Figure 4-132):

```
In[37]: g = sns.lmplot('final_sec', 'split_frac', col='gender', data=data,
                       markers=".", scatter_kws=dict(color='c'))
        g.map(plt.axhline, y=0.1, color="k", ls=":");
```

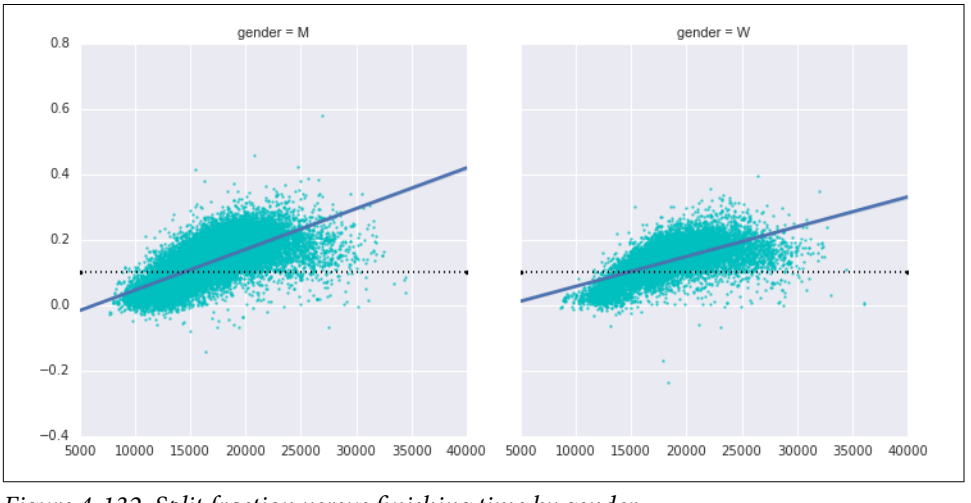

Figure 4-132. Split fraction versus finishing time by gender

Apparently the people with fast splits are the elite runners who are finishing within ~15,000 seconds, or about 4 hours. People slower than that are much less likely to have a fast second split.

Further Resources

Matplotlib Resources

A single chapter in a book can never hope to cover all the available features and plot types available in Matplotlib. As with other packages we've seen, liberal use of IPython's tab-completion and help functions (see "Help and Documentation in IPython" on page 3) can be very helpful when you're exploring Matplotlib's API. In addition, Matplotlib's online documentation can be a helpful reference. See in particular the