Empirical Exercise: Chapter 2

The spreadsheet **Age_HourlyEarnings**, which contains the joint distribution of age (*Age*) and average hourly earnings (*AHE*) for 25- to 34-year-old full-time workers in 2015 with an education level that exceeds a high school diploma. Use this joint distribution to carry out the following exercises. (*Note:* For these exercises, you need to be able to carry out calculations and construct charts using a spreadsheet.)

1. Compute the marginal distribution of *Age*.
2. Compute the mean of *AHE* for each value of *Age*; that is, compute, , and so forth.
3. Compute and plot the mean of *AHE* versus *Age*. Are average hourly earnings and age related? Explain.
4. Use the law of iterated expectations to compute the mean of *AHE*; that is, compute *E*(*AHE*).
5. Compute the variance of *AHE*.
6. Compute the covariance between *AHE* and *Age*.
7. Compute the correlation between *AHE* and *Age*.
8. Relate your answers in (f) and (g) to the plot you constructed in (c).