

We want to see how well you're able to explain topics in statistics and data science. Write a short Jupyter notebook covering these topics:

1. **Hypothesis Testing:** Let's talk about t-tests, p-values. How are they related? What is it telling you? How does it relate to precision-recall? What are the underlying assumptions?
2. **Bayesian posterior inference:** Explain Bayes' Rule. Write some code to actually perform posterior sampling. Work out an example using conjugate priors. How does this compare with hypothesis testing? What are the underlying assumptions?

Be prepared to give a mock "lecture" about these two topics with your prepared Jupyter notebook.

We'll be looking for

1. How well you present: remember that this material should be approachable, applied, and not just a series of formulas
2. How well you understand these topics in depth (the mathematics, the underlying assumptions)
3. How well you understand the concepts and how you can apply them

Please email us a copy of your notebook before your scheduled interview.