Question 3

A

The beta we see is close to 1. This is most likely due to the fact that if employees are dissatisfied, they are probably leaving the comapny, which means the company is not growing as much or might be shrinking. It could also be an early indication of a company doing poorly, or the result of that. On the other hand, if the employees are satisfied, they are probably staying, more employees are joining, the company is probably doing well or the employees are satisfied due to the company recently doing well. All of these factors compound to mean that highly rated companies are probably going to be larger companies, which dominate the market, thus meaning that our portfolio would capture very similar risk to the market portfolio. The employee behavior would very closely resemble investor behavior.

If you long-short by shorting the overall market, that means the institutional investors can get exposure to just the alpha generated by the employee satisfaction rating, rather than being at the whim of overall market trends. This might be less attractive to retail investors since they might want to capture these large market trends and ride off of them in a bull-market like we've seen recently. If we short the overall market, that means the retail investors have less alpha in a bull market, so they would be upset. Institutional investors really want nuanced alpha that protects them from overall trends and capitalizes off of information.

B

Theoretically speaking, if the markets fully priced in the value of employee satisfaction, then we would gain market returns, but not have a significant alpha. We see a discrepancy in the returns between the CAPM predictions and the actual cumulative returns, where ours is producing much more alpha than CAPM predicts up to a point where it is arbitraged away. Thus, we see that the information has not been priced in historically, but in recent years the alpha has gone away and it has been priced in.

C

In the same way that neural networks used to be really good at producing alpha for hedge funds like Renaissance, this strategy was probably popularized and as more people used it, the alpha was arbitraged away. It could also be that people are just dissatisfied across the board because of poor wages or working conditions as we see a lot in politics and the news. But it's probably the former. We see in the cumulative returns that they stagnate in recent years, i.e. the alpha has been arbitraged away, or the information is no longer important.

D

You can use the cookie data or other data to get info on whether or not employees are currently looking at other jobs, and use that to get a measure of how many employees are looking to jump ship. You could also use their cookies to probably find out why they are dissatisfied, since a lot of people are on social media and talking about their qualms. You could also use this data to look at the purchases employees are making, as if employees are making big luxury purchases, it probably means the company is doing well or is about to do very well. If they are searching up the price of cup ramen, the company is probably not doing well.