

# Guidelines for first project proposal

## USSY 292D

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As it says on the course web page, you are supposed to turn in a “Clear articulation of the question you will explore, together with a plan for gathering relevant data”. This should be a well-written (edited!) proposal for your project.

It should start with your question. It can be vague at the first introduction, but then needs to be clarified. For example, you could say “The other day, I met my kindergarten teacher at a grocery store in Cleveland; I grew up in Cincinnati and she currently lives in Memphis. Naturally, we were both astonished, but really: what *are* the odds? ” Then you could go on to describe how you were going to model the situation in order to make a prediction (you don’t need to know all the details yet, but you should try to convince me that you’ll be able to do this, possibly with some help). Finally, you should describe what if any data gathering you plan to do as part of your analysis, and how you plan to get the data.

For another example, you could say “My sister has won an inordinate number of games of chance against me. Is she cheating, or can we put this down to chance?” Then you could describe a mathematical model (for this, I wouldn’t expect you to know about the model yet, but if you do, great; if not, I can tell you about the relevant one – it’s called the arcsine law) which has something to say about this. You could suggest both seeing what the model says about your experience and testing the validity of the model by experiment. You’d describe what experiment you plan to conduct.

The most important thing I’m looking for here is a clearly articulated question that you have some hope of saying something about. You don’t have to know yet about relevant mathematical models, but you should hopefully have a precise enough version of the question that I can help you find the right kind of model. And you should have a realistic description of how you plan to get data, and what you’re going to do with it.