(Q1) Broadly speaking, are you most excited about working with ODEs, PDEs, or ABMs?

ABMs. I am particularly interested in agent-based models because they allow the study of emergent social patterns from simple individual rules, especially in settings like segregation and inequality.

(Q2) Ignoring the math tools, which modeling topics have been the most interesting to you so far?

I have been most interested in modeling segregation and inequality, especially how small individual preferences or biases can lead to large-scale social outcomes.

(Q3) What mathematical processes or techniques have been most appealing to you so far?

I enjoy formulating mathematical models and observing long-term behavior through simulation and visualization. I also find it rewarding to interpret the implications of those results and connect them back to real-world social dynamics.

(Q4) Do you feel you have unfinished business here—that is, is there a specific challenge that you're excited to take on?

Yes. I want to expand on my ABM group project, improving its structure, adding new behavioral dimensions, and investigating the dynamics of tolerance, and learning.

(Q5) What are you hoping to get out of your work on a capstone project?

I hope to strengthen my mathematical modeling skills, including building models from theoretical ideas, implementing them computationally, and effectively communicating results through clear writing and visualizations.

(Q6) What project topics are you considering, and how definite are you on these? Please give a reference to a good paper or internet source for your proposed topic.

I plan to build on Schelling's segregation model, extending it to incorporate utility-based or learning mechanisms that reflect evolving tolerance levels and behavioral nudge.
Reference: Schelling, T. C. (1971). Dynamic models of segregation. Journal of Mathematical Sociology, 1(2), 143–186.

(Q7) I prefer that people work in groups of one or two. What will work best for you?

A group of one would work best for me, as it allows me to iterate freely and explore model variations at my own pace although I am also open to a group of 2.

(Q8) How can I help you in the topic selection process?

Feedback on how I can improve and extend my previous ABM group presentation would be very helpful, particularly on how to strengthen the modeling assumptions, make the visuals clearer, and interpret simulation outcomes more rigorously.