Numerical Methods (ODE Solver)

Find Your Project 2 teammate, seat yourselves comfortably, and read through the rest of this document.

Today's Agenda

Today we'll review material from Chapter 18, implement the SIR model using the ODE solver, and work on proposals for Project 2.

Chapter 18

Write notes here related to Chapter 18 and the ODE solver.

Implement the SIR model using the ODE solver:

1. Make a copy of `chap13.ipynb` called `chap13ode.ipynb`
2. Open it in Jupyter and run all the cells.
3. At the bottom, make a copy of the update function, name it `slope_func`, and transform it into a slope function.
4. Test it with the initial conditions.
5. Make a `System` object with parameters 0.333 and 0.25.
6. Use `run_ode_solver` to run the simulation.
7. Check `details`.
8. Plot `results`.

Project 2

Describe your project proposal in 2–3 sentences.

Reflection Question

Revise your Project 2 goals. Try to write 2–4 goals for your own learning during this project experience, at least one for modeling and one for teaming. If you want to refer to your preliminary goals, they're in Worksheet 21 from October 18; you also created goals based on your Project 1 experience in your Project 1 Reflective Essay.

Next Steps

Before class on Thursday, please do the following things:

- ☐ Write your name here: _____
- ☐ Write your name(s) of your studio partner(s) here: _____
- ☐ By tonight: Scan this worksheet and your Project 2 proposal (i.e., a completed QMRI template), and submit them on Canvas.[1]
- ☐ By Wednesday night: Turn in your HIV model notebook, and sign up for a NINJA check-off meeting using the Google sheet linked from the Canvas assignment.
- ☐ Also by Wednesday night: Read Chapter 19 and complete the reading quiz. Read and run the Chapter 19 notebook.
- ☐ And don't forget to complete the mid-semester survey we sent out this morning. Thank you!
- ☐ Meet in the AUDITORIUM on Thursday.

[1] There is an individual Canvas assignment for the worksheet and a group assignment for the project proposal.