Discrete stochastic modeling for first-year biology students

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Stochastic models, in particular Markov chains, are broadly applicable in various fields of biology and medicine, including cell biology, phylogeny, and clinical decision support. I will describe how discrete Markov models are implemented for a general biology audience, provide learning objectives and examples of computational exercises the students perform, and will share pre- and post-course surveys of the students' attitudes and experiences. R scripts and Shiny apps will be demonstrated and shared via the QUBES hub.