

Quarto Demonstration

Quarto is a tool that lets us combine word processing with executable code in several programming languages, including R. It is super useful, not just for creating reports but also for creating presentations!

You will be asked to submit your homework assignments using Quarto - specifically you will be asked to provide a `.qmd` source file that includes all of your code and a compiled `.pdf` that includes what you want to present to the reader, in this case the instructor and grader. You will also occasionally be asked to provide presentations in the same format.

Your first assignment will include modifying this `.qmd` document, compiling it to `.pdf`, and submitting both the `.qmd` and `.pdf` files.

For now, all I'll demonstrate in this document is typesetting math equations. Specifically, I'm going to demonstrate the density of a gamma distribution, using the shape rate parametrization. If a variable $x \sim \text{Gamma}(\alpha, \lambda)$, then its density is

$$f(x) = \left(\frac{\lambda^\alpha}{\Gamma(\alpha)} \right) x^{\alpha-1} \exp\{-\lambda x\},$$

where $\Gamma(\alpha)$ is the gamma function evaluated at α .