

For the project you should do the following:

1. Find an article that involves applications of some stochastic process that we studied in the course. Or, alternatively, find a data set and do some analysis similar to what we did in applications. Or, alternatively, find some theoretical topic and possibly simulate data to illustrate.
2. Email me your article with a one-paragraph summary (or what data set you want to analyze with some basic analysis done, or the theoretical topic with some work already done). Please send the email by **Tuesday, November 12, 2024**, 10pm, to stat482f24@mail.com with “Project” in the subject line.
3. A stochastic process should be chosen from the following list. The number of spots is limited, so it is to your advantage to email me earlier rather than later. Prior to choosing a process, please check that it is still available.
 - 1) Markov chain (0 spots)
 - 2) Random walk (1 spot)
 - 3) Poisson process (3 spots)
 - 4) Nonhomogeneous Poisson process (1 spot)
 - 5) Compound Poisson process (0 spots)
 - 6) Conditional Poisson process (3 spots)
 - 7) Birth-and-Death process (1 spot)
 - 8) M/M/1 system (1 spot)
 - 9) Branching process (3 spots)
 - 10) Brownian motion (3 spots)
 - 11) Brownian bridge (3 spots)
 - 12) Geometric Brownian motion (2 spots)
 - 13) Ornstein-Uhlenbeck process (2 spots)
4. Prepare a **5-minute Power Point presentation** to talk about your project.
5. Email me your slides for approval **at least one day prior** to the day of your presentation. Send them to stat482f24@mail.com with “Slides” in the subject line.
6. Give your PowerPoint presentation at one of the sessions December 3, 5, and 10 (see the schedule of presentations for details).
7. When listening to presentations of others, you will be required to fill out a questionnaire (see the posted file). Your attendance will be graded based on how well you complete the questionnaires. Presenters’ grades will be based on your answers to those questionnaires. Please prepare 28 questionnaires (they are two per page). You will be listening to 28 presentations and filling out 28 questionnaires.
8. Write a report for your project. The report will be due in pdf format sent to stat482f24@mail.com (with “Report” in the subject line) by 10pm on **the day of your presentation**. Attach the article (if used) to your email.
9. Your score for the project will be based on: slides (25 points), presentation (25 points), attendance (25 points), and report (25 points).