

Portfolio Review for Stat 495

This activity will allow you to reflect on your experiences in statistics looking through the materials in your portfolio. You will look at two pieces in depth, and could replicate the process for as many pieces as you like.

Please complete this form, submit it on Gradescope, and bring it to class as directed on Moodle. We will spend that class day on a related discussion. You will then be writing a reflection and setting goals for future work for homework. Note that I'm not grading the content here – but participation is VERY important.

Portfolio Piece #1

Consider your earliest portfolio piece (or earliest you want to look at). Review it briefly / skim over it.

1. What year were you in when you generated this piece? How much statistical experience did you have?

I was a first-year student when I generated this piece. This was my first statistics class in my life.

2. Which of the following statistical skills are you practicing, applying, and/or demonstrating in this portfolio piece?

Descriptive Statistics

Exploratory Data Analysis

Design

Model Assessment (Comparison)

Estimation

Other Statistical Methods

Working with Statistical Notation / Writing Models

Appropriate Graphical Displays

Regression (of any kind)

Resampling Methods (Bootstrap, Randomization Tests)

Hypothesis Testing (and Sampling Distributions)

Understanding Variability

Understanding Probability

3. If you have a technical appendix or code associated with the piece, which of the following skills are you practicing and/or demonstrating in this portfolio piece? (Skip if not present).

Data wrangling

Reproducible workflow

Good programming practices (comments, organization)

Understanding code syntax

4. Now let's consider communication skills in relation to this portfolio piece. Which of the following are you practicing and/or demonstrating?

Using writing to demonstrate and help develop my understanding of new concepts

Use writing to communicate statistical knowledge and understanding to:

A teacher

My classmates / peers

A non-expert audience

The ability to make a clear, convincing, coherent, well-organized argument

Present ideas in a logical order with an appropriate narrative thread

Provide sufficient interpretation/explanation of figures/graphics

Provide an appropriate amount of supporting evidence without too much extraneous information
Provide a conclusion that summarizes your findings, their importance and implications, and sets forth proposals for future work

5. What do you consider as the strengths of this portfolio piece?

The piece is well-organized and follows a reproducible workflow. There is clear communication of results and the data analysis process.

6. What do you consider as the weaknesses of this portfolio piece?

The piece does not extract too many meaningful insights. Most of the time the comments just restate what we see in the visuals. The data analysis is also not as in-depth as it could be.

7. Does this portfolio piece show proper citation of the data set and other sources? Yes No

Portfolio Piece #2

Consider another portfolio piece – we'll call it the second piece for purposes of this activity, but it doesn't need to be your second piece (in time order). Review it briefly / skim over it.

1. What year were you in when you generated this piece? How much statistical experience did you have?

I was a third-year student and had taken at least 4 statistics classes by then.

2. Which of the following statistical skills are you practicing, applying, and/or demonstrating in this portfolio piece?

Descriptive Statistics

Exploratory Data Analysis

Design

Model Assessment (Comparison)

Estimation

Other Statistical Methods

Working with Statistical Notation / Writing Models

Appropriate Graphical Displays

Regression (of any kind)

Resampling Methods (Bootstrap, Randomization Tests)

Hypothesis Testing (and Sampling Distributions)

Understanding Variability

Understanding Probability

3. If you have a technical appendix or code associated with the piece, which of the following skills are you practicing and/or demonstrating in this portfolio piece? (Skip if not present).

Data wrangling
Reproducible workflow

Good programming practices (comments, organization)
Understanding code syntax

4. Now let's consider communication skills in relation to this portfolio piece. Which of the following are you practicing and/or demonstrating?

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Present ideas in a logical order with an appropriate narrative thread

Provide sufficient interpretation/explanation of figures/graphics

Provide an appropriate amount of supporting evidence without too much extraneous information

Provide a conclusion that summarizes your findings, their importance and implications, and sets forth proposals for future work

5. What do you consider as the strengths of this portfolio piece?

This portfolio piece is very well-documented and shows thought in the design and processes.

6. What do you consider as the weaknesses of this portfolio piece?

Some of the visuals are not too necessary.

7. Does this portfolio piece show proper citation of the data set and other sources? Yes

No

Feel free to copy/paste and fill this out for more portfolio pieces if you like.

Combined

1. Are any of the portfolio pieces you looked through in application areas of interest to you? Do these application areas elicit passion in you? If not, what application areas would? What makes you passionate about these application areas?

Both portfolio pieces are in application areas that are of interest to me and elicit passion in me. The first piece tries to predict prevalence of Alzheimer's disease per fertilizer and herbicide use, economic well-being, and life expectancy. I am passionate about this because such studies that include worldwide data help to foster data-driven decision-making even in emerging markets such as the one I'm from, Kenya. The second piece attempts to predict home zoning groups using home attributes, which further fosters the use of data to identify areas of gap in society and how we can bridge them.

2. Are there any additional skills (in any category), beyond those listed above, that you believe you were practicing or mastering in these pieces? If so, what are those skills?

Project management and independence are skills that I was practicing in those pieces. Being able to drive an entire project from start to finish is really important preparation for the real world.

3. Consider the skills you observed in your portfolio pieces.

a. What skills do you think you have improved the most over time, given your submissions?

Communication about my results and presentation of my work, i.e. design, workflow, and visualizations, have improved the most over time.

b. What activities, classes, or other learning opportunities do you think most contributed to the growth of these skills?

Taking more classes and having practice with in-class activities and projects have had the most contribution to the growth of these skills.