CURTIS MILLER

MATH 3070
LECTURE NOTES

Contents

Preface

These lecture notes were written to accompany Jay Devore's *Probability and Statistics for Engineering and the Sciences (9th ed.)* (Devore, 2015). They are half-filled notes that students are expected to fill out as the instructor lectures and fills out the notes himself on a projected screen for the students to see. This is my preferred lecturing style, as it allows for definitions to be present without needing to waste time writing them down by hand, example problems to be written but not yet solved, and generally improves the flow of the class. Additionally, R code accompanies the mathematical presentation so that students can see how R integrates with the concepts they learn, something that Devore's book does not do. As the class these notes were written for has an accompanying R programming lab, this is a highly useful feature.

These notes do not stand alone and follow tightly to Prof. Devore's book, and I will never release filled-out notes. Additionally, these notes are not intended to be an introduction to R programming; other notes I have written serve that purpose. The R code here is intended to be "real," written to solve problems "the best way possible" rather than in a way students will immediately understand. Devore's book, and some other resource for learning R programming (such as the lab textbook for the course by Verzani (2014)) *must* accompany these notes for them to be of any use. That said, I believe they make a great supplement to Devore's book.

These notes follow Devore's structure exactly and cover Chapters 1 through 9, the chapters covered by the course. Comments are made in the margins, representing asides that are useful or interesting to know (and might even be test or quiz material) yet serve as asides to the main body of information. The notes follow the famous Tufte style; this allows space for the comments and also for plenty of whitespace for note taking and problem solving. There should be plenty of room for students to write.

I hope you find these notes useful.

Curtis Miller

Bibliography

Devore, J. (2015). *Probability and Statistics for Engineering and the Sciences*. Cengage Learning.

Verzani, J. (2014). *Using R for Introductory Statistics, Second Edition*. Chapman & Hall/CRC The R Series. Taylor & Francis.