

Skillset

Matthew Hefner

Statistical Data Analysis and Visualization with R

These skills were initially acquired in a Statistical Data Analysis course and were built upon with personal projects completed in my freetime. The skills are, specifically:

- Extensive coding experience in R
- Data acquisition, visualization and analysis
- Creating websites and typesetting in RMarkdown

These are documented by the *Statistical Data Analysis and Visualization* folder.

Cartographic Design and Adobe Illustrator

These skills were acquired in a course on Cartographic Design and Analysis. Documentation is the included PDFs in *Cartography Portfolio*.

Web Application Development

These skills were originally self-taught and were reinforced in Computer Science and Database courses. They include:

- Familiarity JavaScript Development
- Familiarity with HTML and CSS
- Familiarity with MySQL and various other DBMS softwares

Familiarity with JavaScript is demonstrated in *JavaScript Games*. Other skills are demonstrated on my website at *matthehner.com*.

Mathematical Modeling

Building, interpreting, and utilizing mathematical models. In a sense, much of a degree in Mathematics is learning some form of modeling. Though it will not be completed until the end of Spring 2019, documentation of specific modeling projects can be found in *Modeling Projects*. A simple model of warfare impletemented in JavaScript can be seen in *Web* in my cellular automata based game *War* under the name *War.html*. Additionally, my team won the top rank of “Outstanding” at the Shenandoah Valley Math Modeling Challenge hosted by Virginia Military Institute.

Computational Math and Numerical Analysis and Methods with Python

Learned in the respective courses. Documentation can be found in *Numerical Methods, Analysis, and Computation*.

Development in Java

Originally self-taught, this skill was sharpened by the Computer Science sequence, Database and Data Structures. Documentation can be found in *Java Work*.