Math in the Mountains
July 16-21, 2017 | Carroll College, Helena, Montana

Day 1

• Ice-breaking activities.
• Introduction to Data Science
  o Crash course in data visualization, data software (probably Excel and R), and simple descriptive statistics.
  o How to use data to answer common questions
  o What we can do when we don’t have the data we want
• Meet the clients
  o Clients will be either local (Helena based) non-profit organizations, businesses, or government agencies.
  o Each client will give an overview of the data they’re providing us (or the data they want) and the types of questions they have about the data

Day 2

• Teams form to work on each client problem.
• Second crash-course in Data Science
  o Each team will meet with a Faculty mentor and Carroll College Student Counselor to talk about specific techniques that can be applied to their problem.
  o Student Counselors will help break the consulting task into pieces to be delegated to students.
• Group training: using data to build descriptive and predictive models.

Day 3

• Teams should have their first data visualizations completed to be reported either to their clients or to other campers. (Presentations sometime today).
• Teams meet with clients (as necessary) for more detailed description of problem and Q&A.

Day 4

• Build descriptive models based on data.
• Begin to build predictive models if possible.
• Group training: How to incorporate feedback loops into data driven models.

Day 5

• Finalize descriptive models. Start to tie up loose ends on predictive models if possible.
• Final presentations to clients.