

Math in the Mountains

July 16-21, 2017 | Carroll College, Helena, Montana

Day 1

- Ice-breaking activities.
- Introduction to Data Science
 - Crash course in data visualization, data software (probably Excel and R), and simple descriptive statistics.
 - How to use data to answer common questions
 - What we can do when we don't have the data we want
- Meet the clients
 - Clients will be either local (Helena based) non-profit organizations, businesses, or government agencies.
 - 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
 - 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.
 - 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.