# CSC 577 Project Proposal

Winter 2017

|  |  |
| --- | --- |
| Student name: | Brian Craft |
| Brief description of data set: | The dataset is from a 4 week web crawl of book-crossing and contains over 1M ratings for 271K books and 278K users. |
| Data source: | <http://www2.informatik.uni-freiburg.de/~cziegler/BX/> |
| Recommendation task: | The goal is to create 3 book recommendations for users. |
| Algorithm: | Unconstrained Matrix Factorization  Non-Negative Matrix Factorization  SVD  SVD++ |
| Methodology: | I want to focus on filling in the user-item rating matrix. To do so, I will test the above methods using gradient decent to fill in the U,V matrices and project them back to fill in the ratings matrix. I will then take the three top predicted books for a user and recommend those. |
| Evaluation metric: | MAE  RunTime  Diversity (correlate the ratings vectors for the recommended items) |