- Before You Start
- Module 1: Introduction and Data Science Theory
- Module 2: Working with Data
- Module 3: Visualization, and Building and Evaluating Models
- Module 4: Regression, Classification, and Unsupervised Learning
- **Module 5: Recommenders and Publishing Your Work**

Chapter 19: Recommendation Models

Lab 5A: Working with Recommendation Models

Chapter 20: Introduction to Jupyter Notebooks in Azure ML

KEY POINTS

- You can create recommenders using regression, classification, or clustering models; but a common approach is to create a filter-based recommender that uses matrix factorization. Azure ML supports the **Matchbox Recommender** model, which uses this technique.
- In Azure ML, you should use the **Recommender Split** mode of the **Split** module to prepare data for a recommender, as this distributes user-item pairs evenly between the training and test data sets.
- After splitting the data, you can use a **Train Matchbox Recommender** module to train a recommender.
- After training the recommender, you can use the **Score Matchbox Recommender** to generate predictions. You can generate the following kinds of prediction:
  - **Item Recommendation**: Predicts recommended items based on a given user.
  - **Related Items**: Predicts recommended items based on a given item.
  - **Rating Prediction**: Predicts ratings for given users and items.
  - **Related Users**: Predicts users based on a given user.
- Use the **Evaluate Recommender** module to evaluate recommender performance. You can evaluate the model based on the following metrics:
  - *Normalized Discounted Cumulative Gain* (NDCG) for item recommendation, related items, and related users.
  - *Mean Absolute Error* (MAE) and *Root Mean Squared Error* (RSME) for rating prediction

FURTHER READING

***Note**: These links take you to external sites outside of the edX course.*

- **Train Matchbox Recommender** module: https://msdn.microsoft.com/en-us/library/azure/dn905987.aspx
- **Split** module: https://msdn.microsoft.com/en-us/library/azure/dn905969.aspx
- **Score Matchbox Recommender** module: https://msdn.microsoft.com/en-us/library/azure/dn905970.aspx
- **Evaluate Recommender** module: https://msdn.microsoft.com/en-us/library/azure/dn905954.aspx

Chapter 21: Publishing Azure ML Models

Lab 5B: Publishing Models in Azure ML

Module 5 Review
Homework due Oct 30, 2015 at 00:00 UTC

▸ Final Exam