

INTRODUCTION TO MACHINE LEARNING

Unsupervised Learning Algorithms

WORKSHOP DETAILS

- Instructor: Tanya Khanna
- Email: tk759@scarletmail.rutgers.edu
- Course Materials: Github Link – https://github.com/Tanya-Khanna/DataScienceWorkshop_Fall-2024_NBL
- Workshop Recordings: <https://libguides.rutgers.edu/datascience/python>
- Spring 2024 Workshops: [Link](#)
- Workshop Feedback Form: https://rutgers.libwizard.com/f/graduate_specialist_feedback

WORKSHOPS SCHEDULE

Introduction to Python Programming	September 9, 2024; 4 – 5:30 PM
Advanced Python Programming	September 16, 2024; 4 – 5:30 PM
Web Scraping with Python	September 23, 2024; 4 – 5:30 PM
Mastering Data Analysis: Pandas and Numpy	September 30, 2024; 4 – 5:30 PM
Data Management with Python: SQL and NoSQL	October 7, 2024; 4 – 5:30 PM
Python for Visualization and Exploration	October 14, 2024; 4 – 5:30 PM
Introduction to Machine Learning: Supervised Learning	October 21, 2024; 4 – 5:30 PM
Introduction to Machine Learning: Unsupervised Learning	October 28, 2024; 4 – 5:30 PM
Deploying Machine Learning Models	November 4, 2024; 4 – 5:30 PM
Ethical AI and Responsible Data Science	November 11, 2024; 4 – 5:30 PM
Large Language Models (LLMs) and ChatGPT	November 18, 2024; 4 – 5:30 PM

<https://libcal.rutgers.edu/calendar/nblworkshops?cid=4537&t=d&d=0000-00-00&cal=4537&inc=0>

TABLE OF CONTENTS

1. *Fundamentals of Unsupervised Learning*
2. *Types of Unsupervised Learning: Clustering, Dimensionality Reduction & Association Rule Mining*
3. *Practical End-to-End example combining KMeans Clustering & PCA*
4. *DBSCAN Clustering: Theory*
5. *Market Basket Analysis: Practical Example*