

APPLIED AI: BUILDING RECOMMENDATION SYSTEMS WITH PYTHON

Course Code: 840011

Quick Start to Designing, Building and Deploying Scalable
Recommendation Models using Python, Pandas, Pinecone and More

In today's digital landscape, recommendation systems are the driving force behind many of the personalized experiences we encounter daily. Think of the precision with which platforms like Netflix or Spotify cater content to individual tastes; that's the magic of recommendation systems in action. Our two-day intensive course, **Building Recommendation Systems using Python**, will immerse you in the captivating world of data-driven personalization.

The journey starts with a solid foundation, acquainting you with the core concepts and the varied types of recommender systems. As you delve deeper, you'll harness the robust capabilities of the Pandas library, a crucial tool for data manipulation, setting the stage for constructing both rudimentary and advanced content-based recommenders. From here, the course ventures into the intricacies of data mining techniques, allowing for a richer understanding and application of recommendation principles.

The core value of this course lies in its practical approach. Not only will you navigate the theoretical waters, but you'll also embark on a hands-on adventure with PineCone, a groundbreaking tool in the machine learning domain. This ensures a comprehensive learning experience, preparing you to craft and deploy scalable recommendation models adeptly.

Upon completing this course, you'll be well-versed in the nuances of recommendation systems, empowered with the skills to design, implement, and optimize these systems, priming you to elevate user experiences, boost customer engagement, and drive informed decisions across varied digital platforms.

What You'll Learn

This course combines engaging instructor-led presentations and useful demonstrations with valuable hands-on labs and engaging group activities.

Working in a hands-on learning environment, guided by our engaging AI expert

you'll:

- Be able to confidently distinguish between the different types of recommendation systems.
- Master the Pandas library, equipping you to shape and prep data for your recommenders.
- Get hands-on experience building both basic and intricate content-based recommendation systems, enabling you to design systems that truly align with user needs and preferences.
- Master the world of data mining techniques, from clustering to dimensionality reduction. You'll become adept at sifting through data to uncover those key insights.
- Explore both user-based and item-based collaborative filtering, ensuring your recommendations are spot-on.
- Be able to design recommenders, and be able to deploy them into the real world using innovative tools like PineCone.

Who Needs to Attend

This Intermediate level course is geared for experienced technical professionals eager to meld the capabilities of AI with the dynamism of web applications. Roles might include:

- Experienced web developers
- Data analysts
- Machine learning engineers
- UX Designers
- Digital product managers

If you're passionate about enhancing digital experiences, tailoring user interactions, or predicting online behaviors, this immersive journey into the intelligent web realm is tailor-made for you.

Prerequisites

To ensure a smooth learning experience and maximize the benefits of attending this course, you should have the following prerequisite skills:

- **Basic Python Proficiency:** An understanding of Python's fundamental syntax, structures, and basic programming concepts is essential.
- **Familiarity with Basic Data Analysis:** Some exposure to elementary data analysis concepts, even if not in-depth, will be beneficial.

APPLIED AI: BUILDING RECOMMENDATION SYSTEMS WITH PYTHON

Course Code: 840011

VIRTUAL CLASSROOM LIVE

\$2,984 CAD

3 Day

Virtual Classroom Live Outline

DAY 1

1. Getting Started with Recommender Systems

- Technical requirements
- What is a recommender system?
- Types of recommender systems
- Hands-on Activity / Lab

2. Manipulating Data with the Pandas Library

- Technical requirements
- Setting up the environment
- The Pandas library
- The Pandas DataFrame
- The Pandas Series
- Lab

3. Building your First Recommender with Pandas

- Technical requirements
- The simple recommender
- The knowledge-based recommender
- Hands-on Activity / Lab

4. Building Content-Based Recommenders

- Technical requirements
- Exporting the clean DataFrame
- Document vectors
- The cosine similarity score

- Plot description-based recommender
- Metadata-based recommender
- Suggestions for improvements
- Hands-on Activity / Lab

DAY 2

5. Getting Started with Data Mining Techniques

- Problem statement
- Similarity measures
- Clustering
- Dimensionality reduction
- Supervised learning
- Evaluation metrics
- Hands-on Activity / Lab

6. Building Collaborative Filters

- Technical requirements
- The framework
- User-based collaborative filtering
- Item-based collaborative filtering
- Model-based approaches
- Hands-on Activity / Lab

7. Using PineCone

- Technical requirements
- Introduction
- Case study and project
- Hands-on Activity / Lab

DAY 3

8. Generative AI and Its Magic with GPT

- Introduction to GPT and Generative AI
- GPT in Recommendation Systems
- Explore GPT's role in fine-tuning user preferences.
- Lab

9. Ethical AI – Navigating the Grey Areas

- Understanding Ethical Implications in AI
- Grasp the moral complexities in recommendation systems.
- Bias and Fairness in Recommenders
- Dissect potential biases in AI-driven recommendations.
- Lab

10. Job Aids Using Generative AI

- Introduction to AI-Powered Job Aids
- Understand how GPT can aid daily tasks.
- Applications in Data Processing and Analysis

- Learn GPT's role in data analytics enhancements.
- Lab

Jul 16 - 17, 2025 | 10:00 AM - 6:00 PM EDT

Sep 18 - 19, 2025 | 10:00 AM - 6:00 PM EST

Nov 17 - 18, 2025 | 10:00 AM - 6:00 PM EST



APPLIED AI: BUILDING RECOMMENDATION SYSTEMS WITH PYTHON

Course Code: 840011

PRIVATE GROUP TRAINING

3 Day

Visit us at www.globalknowledge.com or call us at 1-866-716-6688.

Date created: 5/12/2025 4:55:32 PM

Copyright © 2025 Global Knowledge Training LLC. All Rights Reserved.