

Target Persona(s)

- Search Engineer
- Data Scientist
- DevOps/Sys Admin
- Data Scientist
- Software Engineer

Recommended Audience

Fusion Foundations is the starting point to learn anything about Fusion. This course will enable search platform or business users who are working on or considering a Fusion-based solution implementation.

Course Summary

Fusion Foundations is the introductory course to Lucidworks Fusion and a pre-requisite to *Advanced Fusion*. Topics include Fusion architecture, ingestion, indexing and querying. Learners will examine how search principles operate in Fusion. Discover the full extent of the platform's distributed capabilities, construct and optimize sophisticated search and data-driven applications. Each topic module includes hands-on lab practice.

Pre-Requisites

- *What Is Search* eLearning
- Basic experience with Linux OS and command-line tools is helpful but not required

Skills and Concepts

- Explain features of a search application
- Build a search application in Fusion
- Describe Fusion architecture
- Examine the document ingest and indexing process
- Transform documents for the best index performance
- Interpret Fusion queries

Course Outline

1. Introduction to Fusion Architecture
2. Fusion Features
3. Ingesting Data
4. Indexing Data
5. Query Concepts
6. Search Relevance

Target Persona(s)

- Search Engineer
- Data Scientist
- Data Engineer/DBA

Recommended Audience

Search Engineers, Data Engineers and Data Scientists who are working on or considering a Fusion-based solution and want to fine-tune their Fusion applications to significantly improve search relevance and user experience.

Course Summary

Expanding on topics introduced Fusion Foundations, learn to calibrate your search applications for optimal relevance. Implement custom JavaScript in Fusion Pipeline stages to build powerful and responsive scripts at Index and Query time that can enable you to ingest data and satisfy custom query requirements. You will also be introduced to Fusion SQL, which enables self-serve analytics at massive scale. Each topic module includes hands-on lab practice

Pre-Requisites

- *Fusion Foundations*

Skills and Concepts

- Improve search results precision and recall
- Utilize boost factors and functions to increase relevance and leverage analytics in Fusion
- Evaluate jobs and scheduling in Fusion
- Use index and query profiles in Fusion
- Use Fusion & JavaScript engine to develop index/query time custom stages
- Summarize Fusion's relational SQL capabilities

Course Outline

1. Advanced Query Tools
2. Fusion Jobs and Scheduling
3. Index and Query Profiles
4. Fusion JavaScript
5. SQL in Fusion
6. Signals in Fusion

Target Persona(s)

- Search Engineer
- Data Scientist
- Data Engineer/DBA

Recommended Audience

Search Developers, Data Architects, Data Scientists, AI/Machine Learning Engineers, and Search Project Managers who are working on or considering Fusion-based solutions and want to fine-tune their Fusion environments to significantly improve search relevance and user experience.

Course Summary

Take a deep dive into Fusion AI and machine learning techniques used to improve relevance and recommendations. Attendees will learn how to leverage Fusion AI capabilities such as signal boosting, query intent detection, recommendations, and synonym and misspelling detection. Each topic module includes hands-on lab practice.

Pre-Requisites

- *Fusion Foundations*
- *Advanced Fusion*
- *Data Science Demystified* eLearning

Skills and Concepts

- Evaluate Machine Learning in Fusion
- Deep dive into classification Machine Learning Jobs, their properties and use-cases
- Explore Fusion's query analytics capabilities
- Analyze clustering Machine Learning in Fusion
- Examine the power of Fusion experiments
- Implement personalized recommendations

Course Outline

1. Machine Learning in Fusion
2. Classification: Documents and Query Intent
3. Query Analytics and Natural Language Processing
4. Document Clustering
5. Experiments
6. Recommendations

Target Persona(s)

- Search Engineer
- Data Engineer/DBA
- Data Scientist
- Merchandiser
- DevOps/Sys Admin
- Software Engineer
- CIO

Recommended Audience

Those who are working on or considering implementing a revolutionary search experience. Search engineering team and day to day users of the Fusion platform.

Course Summary

This 3-day training bundle includes our core Fusion courses that will be taught over 3-days - *Fusion Foundations*, *Advanced Fusion* and *Practical Data Science with Fusion AI*.

Day 1

Fusion Foundations

- Introduction to Fusion Architecture
- Fusion Features
- Ingestion Data
- Indexing Data
- Query Concepts
- Search Relevance

Day 2

Advanced Fusion

- Advanced Query Tools
- Fusion Jobs and Scheduling
- Index and Query Profiles
- Fusion JavaScript
- SQL in Fusion
- Signals in Fusion

Day 3

Practical Data Science with Fusion AI

- Machine Learning in Fusion
- Classification: Documents and Query Intent
- Query Analytics and Natural Language Processing
- Document Clustering
- Experiments
- Recommendations

Target Persona(s)

- Search Engineer
- Data Engineer/DBA
- Software Engineer
- UI Engineer
- CIO

Recommended Audience

UI developers and search engineers interested in low-code UI's with App Studio and/or Lucidworks UX. Search Project Managers, Front-end Developers and Search Application Developers who are working on or considering a Fusion-based solution and want to considerably reduce the development time to build a custom front-end application.

Course Summary

Build custom applications with considerably reduced development time. Full stack developers with limited UI experience can use this intuitive toolkit to quickly and easily build applications that connect people with data. Learn a powerful markup language that encapsulates commonly used UX patterns. Learn how it can help you effectively present insights across multiple use cases and verticals. You will also explore wizard-driven templates for applications and how to tailor them to your needs. Each topic module includes hands-on lab practice.

Pre-Requisites

- Basic experience with Linux OS and command-line tools is helpful but not required

Skills and Concepts

- Explore UI design for intuitive, user friendly search applications
- Build search pages that highlight results
- Design layouts that include dynamic content
- Construct effective detail pages that utilize multi query and federation
- Create compelling visualizations including charts, maps, tables and sankey diagrams

Course Outline

1. Intro to App Studio Enterprise
2. Markup Basics: Search & Facets
3. Markup Basics: Layouts
4. Configuring Detail Pages
5. Multiquery & Federation
6. Visualizations
7. Markup Basics: Charts

Target Persona(s)

- DevOps/Search App System Administrator
- Search Project Manager
- Data Scientist/Architect
- Search Developer
- Front-End Developer
- Marketing/Merchandiser

Recommended Audience

This course is the starting point to learn Solr Open Source and is the necessary pre-requisite course for Solr Development & Solr DevOps at Scale. Anyone working with a search platform, or business users who are working on or considering a search solution implementation will benefit from this course.

Course Summary

Solr Foundations is an introductory course that teaches how to build sophisticated, horizontally scalable search applications with Apache Solr, the most widely used open source search engine that plays a key role in the modern data ecosystem. Each topic module includes hands-on lab practice.

Pre-Requisites

- Basic experience with Linux OS and command-line tools is helpful but not required

Skills and Concepts

- Understand the relevance and scoring of document results
- Understand advanced indexing techniques
- Learn advanced query syntax to optimize search results
- Understand the use of advanced query parsers
- Language and multilingual search

Course Outline

1. What is Solr
2. Solr Indexing
3. Solr Queries
4. Search Components
5. Troubleshooting & Debugging

Target Persona(s)

- DevOps/Search App System Administrator
- Search Project Manager
- Data Scientist/Architect
- Search Developer
- Front-End Developer
- Marketing/Merchandiser

Recommended Audience

This course is a continuation of Solr Foundations. Anyone working with a search platform, or business-users who are working on or considering a search solution implementation will benefit from this course.

Course Summary

Develop sophisticated, horizontally scalable search applications with Apache Solr, the most widely used open source search engine that plays a key role in the modern data ecosystem. This course takes a deep-dive into advanced querying capabilities such as geospatial, phrase, and function queries; tuning relevance to meet specific domain requirements and the Solr architecture. Each topic module includes hands-on lab practice.

Pre-Requisites

- *Solr Foundations*
- Basic experience with Linux OS and command-line tools is helpful but not required

Skills and Concepts

- Understand the relevance and scoring of document results
- Understand advanced indexing techniques
- Learn advanced query syntax to optimize search results
- Understand the use of advanced query parsers
- Language and multilingual search

Course Outline

1. Solr Adv Dev Intro
2. Relevance & Boosting
3. Advanced Indexing
4. Advanced Queries
5. Advanced Query Parsers
6. Language & Multilingual Search

Target Persona(s)

- DevOps/Search App System Administrator
- Search Project Manager
- Data Scientist/Architect
- Search Developer
- Front-End Developer

Recommended Audience

This advanced course is intended for DevOps engineers using Solr Open Source on-premise. If you are working with a search application or you are a business-user working on or considering a search solution implementation.

Course Summary

Solr DevOps at Scale teaches concepts in how to configure, deploy and manage Apache Solr in a distributed environment to power your current application's search and indexing needs. This course also takes a deep dive into the SolrCloud component which enables the distributed capabilities of Solr. You will learn pro-tips from our field experts on how to monitor and troubleshoot common issues as well as implementing a production go-live checklist. Each topic module includes hands-on lab practice.

Pre-Requisites

- *Solr Foundations or Solr Advanced*
- Basic experience with Linux OS and command-line tools is helpful but not required

Skills and Concepts

- SolrCloud and advanced components
- Learn to use JVM (Java Virtual Machine) internals
- SolrCloud administration
- Solr autoscaling
- Use monitoring and troubleshooting techniques
- Implement the production go-live checklist

Course Outline

1. Solr Cloud Basics
2. Solr Cloud Internals
3. Advanced Solr Cloud
4. JVM Internals
5. Solr Cloud Administration
6. Solr Autoscaling
7. Troubleshooting & Monitoring
8. Production Checklist