UCDAVIS

Learn SQL Basics for Data Science Specialization

Instructors: Don Noxon +2 more

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3 course series
Get in-depth knowledge of a subject

4.6 ★
(10,418 reviews)

Beginner level
No prior experience required

2 months to complete
at 10 hours a week

Flexible schedule
Learn at your own pace

What you'll learn

- ✓ Use SQL commands to filter, sort, & summarize data; manipulate strings, dates, & numerical data from different sources for analysis
- ✓ Develop a project proposal & select your data, perform statistical analysis & develop metrics, and present your findings & make recommendations
- ✓ Assess and create datasets to solve your business questions and problems using SQL

Skills you'll gain

Apache Spark | Data Visualization | Presentations | Databricks | SQL | Data Pipelines | Data Governance | Statistical Analysis | Descriptive Statistics | Data Storytelling | Data Quality | Data Modeling | Database Design | JSON | Data Analysis | Complex Problem Solving | Data Lakes | Peer Review | Distributed Computing | Exploratory Data Analysis | View less skills

Details to know

Shareable certificate
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- Learn in-demand skills from university and industry experts
- Master a subject or tool with hands-on projects
- Develop a deep understanding of key concepts
- Earn a career certificate from University of California, Davis

Specialization - 3 course series

This Specialization is intended for a learner with no previous coding experience seeking to develop SQL query fluency. Through three progressively more difficult SQL projects with data science applications, you will cover topics such as SQL basics, SQL analysis, problem- solving strategies, debugging, improving data quality, and more. These topics will prepare you to apply SQL creatively to analyze and explore data; demonstrate efficiency in writing queries; create data analysis datasets; conduct feature engineering, use SQL with other data analysis and machine learning toolsets; and use SQL with unstructured data sets.

Read less

SQL for Data Science

Course 1 • 15 hours

Course details

What you'll learn

- Identify a subset of data needed from a column or set of columns and write a SQL query to limit to those results.
- Use SQL commands to filter, sort, and summarize data.
- Create an analysis table from multiple queries using the UNION operator.
- Manipulate strings, dates, & numeric data using functions to integrate data from different sources into fields with the correct format for analysis.

Skills you'll gain

SQL · Data Governance · Query Languages · Relational Databases · Data Quality · Data Manipulation · Data Transformation · Database Design · Data Analysis · Data Modeling · Data Science

SQL Problem Solving

Course 2 • 10 hours

Course details

What you'll learn

- Validate and clean a dataset
- Assess and create datasets to answer your questions
- Solve problems using SQL
- Build a simple testing framework to touch on AB Testing

Skills you'll gain

SQL · JSON · Data Transformation · Business Reporting · Debugging · Business Metrics · Data Quality · Data Visualization · Data Analysis · Data Presentation · Exploratory Data Analysis · Predictive Analytics · Forecasting · Complex Problem Solving

SQL for Data Science Capstone Project

Course 3 • 35 hours

Course details

What you'll learn

- Develop a project proposal and select your data
- Perform descriptive statistics as part of your exploratory analysis
- Develop metrics and perform advanced techniques in SQL
- Present your findings and make recommendations

Skills you'll gain

Data Analysis · Performance Metric · Data Manipulation · Peer Review · Data Storytelling · Text Mining · Statistical Analysis · Exploratory Data Analysis · Descriptive Statistics · Business Analytics · Data Science · Proposal Development · SQL · Data Modeling · Presentations · Target Audience

Earn a career certificate

Add this credential to your LinkedIn profile, resume, or CV. Share it on social media and in your performance review.

Instructors

Don Noxon
University of California, Davis
1 Course • 41,380 learners

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Frequently asked questions

How long does it take to complete the Specialization?

This Specialization consists of 4 courses that could take anyone from 4-6 months to complete.

What background knowledge is necessary?

This Specialization is intended for the learner with no prior knowledge and will progress through the courses advancing their SQL skills.

Do I need to take the courses in a specific order?

We absolutely recommend you take the first course listed first and the Capstone project last, but courses two and three can be completed in either order.

Is this course really 100% online? Do I need to attend any classes in person?

Can I just enroll in a single course?

Is financial aid available?

Can I take the course for free?

Will I earn university credit for completing the Specialization?

Show less

More questions

Visit the learner help center

Financial aid available, learn more

Skills

- Artificial Intelligence (AI)
- Cybersecurity
- Data Analytics
- Digital Marketing
- English Speaking
- Generative AI (GenAI)
- Microsoft Excel
- Microsoft Power BI
- Project Management
- Python

Certificates & Programs

- Google Cybersecurity Certificate
- Google Data Analytics Certificate
- Google IT Support Certificate
- Google Project Management Certificate
- Google UX Design Certificate
- IBM Data Analyst Certificate
- IBM Data Science Certificate
- Machine Learning Certificate
- Microsoft Power BI Data Analyst Certificate
- UI / UX Design Certificate

Industries & Careers

- Business
- Computer Science
- Data Science
- Education & Teaching
- Engineering
- Finance
- Healthcare
- Human Resources (HR)
- Information Technology (IT)
- Marketing

Career Resources

- Career Aptitude Test
- Examples of Strengths and Weaknesses for Job Interviews
- High-Income Skills to Learn
- How Does Cryptocurrency Work?
- How to Highlight Duplicates in Google Sheets
- How to Learn Artificial Intelligence
- Popular Cybersecurity Certifications
- Preparing for the PMP Certification
- Signs You Will Get the Job After an Interview
- What Is Artificial Intelligence?

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