Google

Reading: Key takeaways for AI in Advanced Data Analytics

In this lesson, you learned about AI and how it can help you as a data analyst. Then, you practiced prompting a generative AI (gen AI) tool to produce useful outputs. It's helpful to use the TCREI (task, context, references, evaluate, and iterate) framework to guide your prompts. When you Thoughtfully Create Really Excellent Inputs, you're more likely to get results that work for you!

Continue to experiment with gen AI tools to brainstorm ideas, boost your productivity, help you avoid mistakes, and aid in your decision-making process. Practice with Gemini or other gen AI tools to find out more about these topics as you apply what you've learned in your Google Data Analytics Certificate to your work – or explore using it outside of work to continue your AI learning journey.

Key takeaways

The growing role of AI in data analytics

AI is rapidly changing the data analytics field. As a data analyst, you can boost your career by understanding this powerful technology and how to use it effectively in your daily work. While you continue to develop expertise in this profession, remember that:

- Understanding and using AI is important for your future success as a data analyst, as AI tools become more commonly used in the field.
- AI tools can help you perform tasks such as preparing data, analyzing large amounts of data, and automating routine data analysis tasks.

How data analysts can use gen AI to work smarter and faster

Gen AI is a type of AI that's capable of creating new content. You can use gen AI tools to complete both practical and creative tasks. As a data analyst, you might use gen AI tools to:

- Create content, like reports, data visualizations, and dashboards featuring data summaries and other key data insights.
- Analyze and summarize large amounts of information, like marketing campaign data.
- Answer questions you have about data visualizations, like how to incorporate accessibility best practices.
- Simplify daily tasks involved in data cleaning processes, like removing duplicate data.
- Brainstorm ideas and conduct research during the data analysis process.

Basic guidelines for responsible use of generative AI

AI tools have their share of limitations. To use generative AI responsibly, make sure to:

- Review generative AI outputs carefully for accuracy and usefulness.
- Disclose your use of generative AI.
- Consider the privacy and security implications of using generative AI, and avoid entering sensitive information.
- Apply a human-in-the-loop approach, as AI should always serve as a complement to our human skills and abilities.

Note: This list is not exhaustive. Be sure to check your company's policies on the use of generative AI.

AI in action: real-world applications in data analysis

In this lesson, you learned how a real data analyst harnesses AI technology in their role at Google. Myles shared how gen AI tools like Gemini can help you:

- Detect data quality issues, standardize data formats, detect and remove duplicates, and identify potential dataset features.
- Make recommendations for ways to organize and structure data, including specific formulas to implement.
- Brainstorm precise, relevant, and actionable questions for effective data analysis.
- Develop data visualizations to effectively communicate insights.
- Write and debug R code to tackle complex problems and uncover deeper insights.

Try these examples out yourself using Gemini or another gen AI tool, and keep experimenting to uncover new ways to apply AI to your role and responsibilities. With help from AI, you can spend less time on repetitive, routine tasks and devote more of your energy and attention to performing deeper analyses, sharing data-driven insights, and using them to guide business decisions.

Resources for more information

If you're interested in learning more, please visit the following resources:

- [What is Artificial Intelligence (AI)?](): Explore Google Cloud's introduction to AI, including other cases when AI can be used, such as in speech and image recognition.
- [Science & Tech Spotlight: Generative AI](): Discover why generative AI systems matter in today's world in this article by the U.S. Government Accountability Office (GAO).
- [The Data Cards Playbook](): Leverage this toolkit for transparency in AI dataset documentation.
- [Applying generative AI to product design with BigQuery DataFrames](): Examine a practical example of how generative AI can be used in BigQuery to boost the creative process and accelerate testing.