

Exercise 4.1

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1. Write 2 to 3 sentences on why Python is so popular among data analysts.
 - Python is popular among data analyst due to its simple, readable syntax, and extensive libraries. It offers flexibility and integration capabilities with other technologies. This makes Python perfect for data analysis. As well as Python is an open source, freely available and widely used in all data science fields and machine learning.
2. After doing some research, name the 5 top companies in the world that use Python (either as a tool for software engineering or for analytics).
 - Google uses Python across various applications such as AI, data management and algorithms.
 - Netflix uses Python for data analysis, backend services, content distribution, and machine learning.
 - Facebook uses Python for production engineering, automating tasks, and maintaining the backend infrastructure.
 - Instagram uses Python for their essential for handling Instagram's massive user base and ensuring smooth operations.
 - NASA uses Python for various applications, including data analysis, machine learning, and the management of shuttle mission planning.
3. For each of the following scenarios, explain what tool you would use and why
 - **Small data set tweaks and minor analysis:** Use Excel because it allows easy filtering and quick chart creation.
 - **Retrieve data from a very large database:** Use SQL because it is designed for efficient querying of large databases.
 - **Sort and prepare a large data set for advanced analysis:** Use Python with Pandas due to its ability to handle large datasets and perform complex data manipulation tasks efficiently.



