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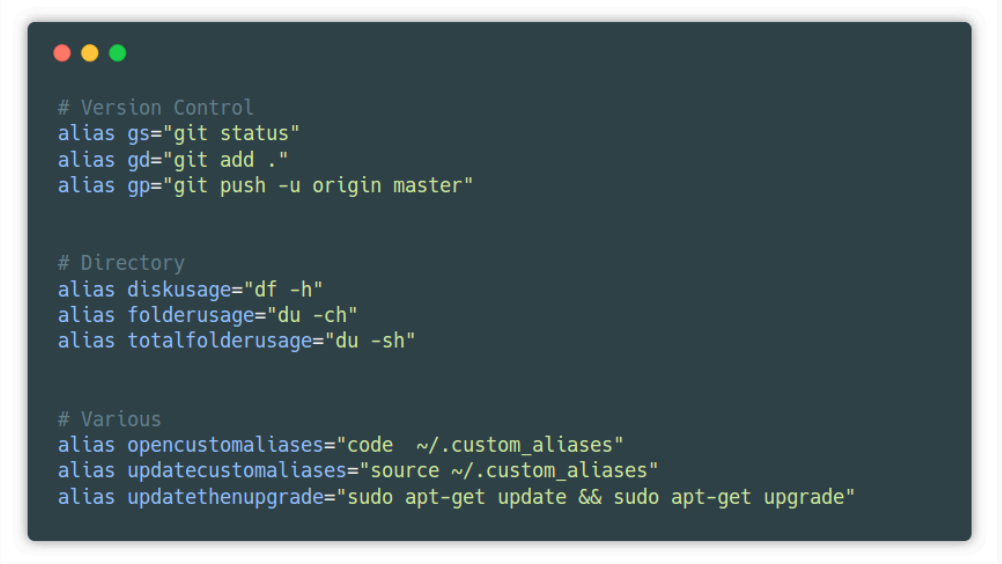
Starting from the bottom: **BASH**

Bash: What is it?

Short for “Bourne Again Shell,” Bash is a widely used command-line shell and scripting language primarily used in Unix-like operating systems such as Linux and macOS.

It serves as the interface between the user and the operating system, allowing users to interact with the system via text-based commands.

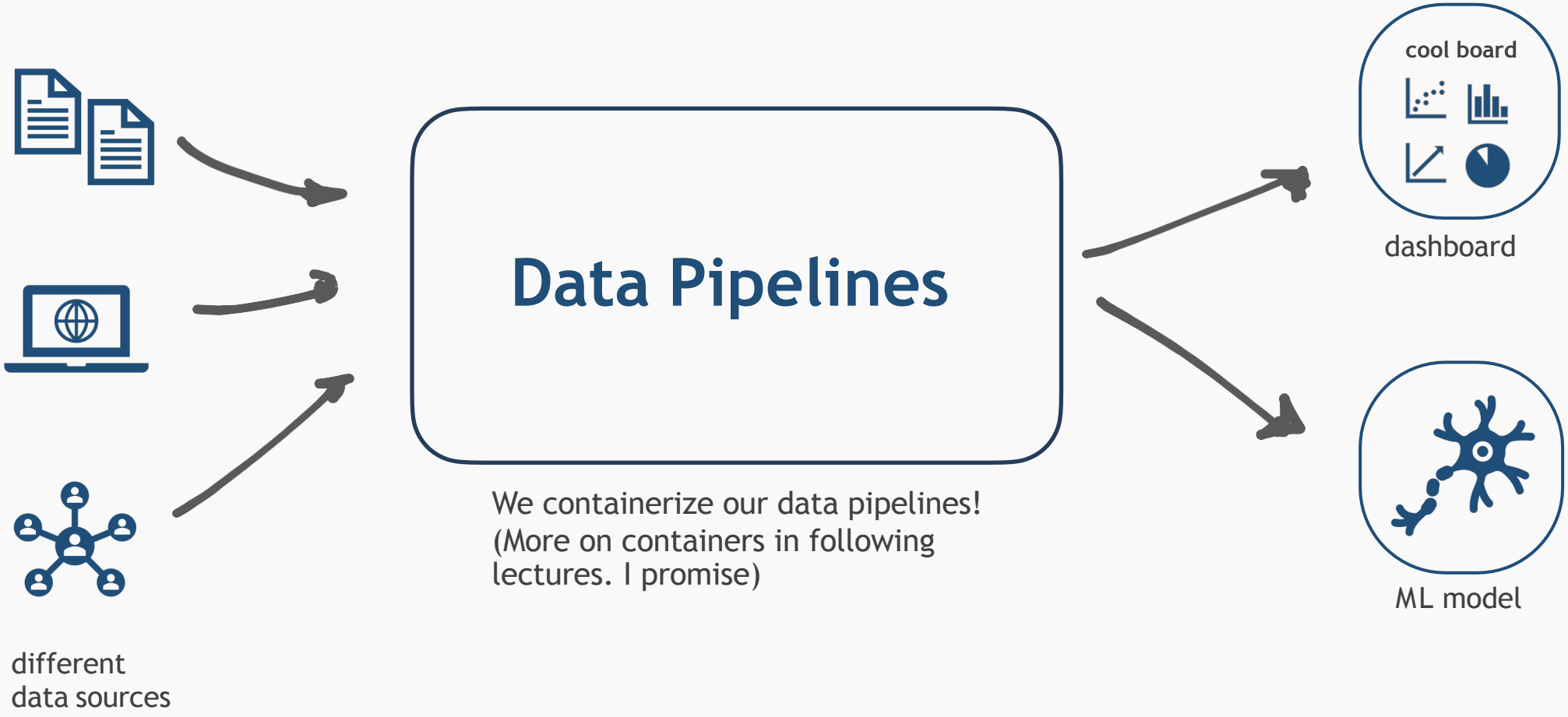


```
# Version Control
alias gs="git status"
alias gd="git add ."
alias gp="git push -u origin master"


# Directory
alias diskusage="df -h"
alias folderusage="du -ch"
alias totalfolderusage="du -sh"


# Various
alias opencustomaliases="code  ~/.custom_aliases"
alias updatecustomaliases="source ~/.custom_aliases"
alias updatethenupgrade="sudo apt-get update && sudo apt-get upgrade"
```

So why are we learning **Bash** in data engineering???



So what can we do in **Bash?**

Features of Bash:

- Command Execution: Bash allows users to execute commands directly from the command line. Users can run system commands, launch applications, and perform various tasks using simple text-based commands.

- Scripting: One of Bash's most powerful features is its scripting capabilities. Users can write Bash scripts, which are sequences of commands stored in a file, to automate repetitive tasks, perform system administration tasks, and create complex workflows.

- Variables and Control Structures: Bash supports variables for storing data and control structures such as loops and conditional statements for creating logic in scripts. This allows for dynamic and flexible script behavior.

- I/O Redirection: Bash provides mechanisms for redirecting input and output streams, allowing users to manipulate file streams, combine commands, and control where input comes from and where output goes.

- Pipeline: Bash supports the concept of pipelines, which allows users to chain multiple commands together, passing the output of one command as the input to another. This enables powerful data processing and manipulation workflows.

Lets get **Bashing**

Here are a few basic Bash commands to get you started:

- ls: List files and directories in the current directory.
- cd: Change directory.
- pwd: Print the current working directory.
- mkdir: Create a new directory.
- touch: Create a new file.
- cp: Copy files and directories.
- mv: Move or rename files and directories.
- rm: Remove files and directories.
- nano: text editor

Bash exercises

1. Create folder with name folder1
2. Create two txt files inside folder1
3. Navigate out of folder
4. Create folder with name folder2
5. Move files in folder1 to folder2
6. Delete folder1

OPTIONAL

1. Use nano to alter text inside the txt files.

ADVANCED

1. Create folder with name adv1
2. Create .sh folder with “touch myscript.sh”
3. Write code in the script with “nano myscript.sh”
4. Test the following:
    - hello world
    - creating files
    - The basic tasks above
5. Save the file and run it with “bash myscript.sh”