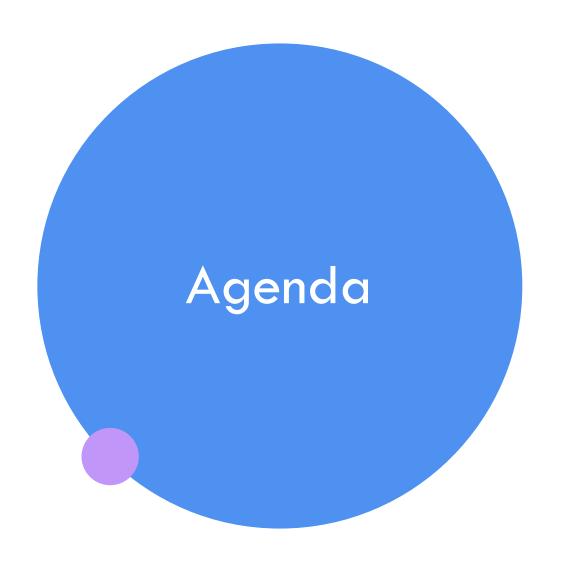




Data Science in Chemical Engineering

Tutorial 1.5: Course Tools

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COURSE TOOLS

- Git & GitHub
- PythonJupyter

VERSION CONTROL: GIT & GITHUB

- Git
 - distributed version control system
 - most used for tracking changes and collaborating on code projects
- GitHub
 - Most popular cloud-based platform for version control using Git
 - Can be used with the web interface or with command line
 - Sign up: https://github.com/
 - Download: https://desktop.github.com/



VERSION CONTROL: USEFUL TERMS

- Repository
 The project folder set up for version control
- Fork
 A copy of an existing repository
- Pull Request
 A request to the editors to review and approve code changes

BASIC GIT COMMANDS

- init
 Initializes Git in the current folder to use version control locally on your machine
- add <file_name>
 Adds the indicated file to track changes
- commit Saves a new version with tracked changes
- branchLists all branches in repository

BASIC GIT COMMANDS

- git remote add origin <repository_url>
 Connects local repository to remote repository
- git push -u origin main
 Pushes the latest version from the local repository to the remote repository
- git pull
 Pulls the latest version from the remote repository to the local repository

PYTHON



Course Tools

- Python is an open-source programming language created by a Dutch programmer named Guido van Rossum in 1991
- Easy to learn and easy to read
- Great community support
- Download: https://www.python.org/downloads/





Jupyter

 A web application that allows creating and sharing interactive documents (notebooks) with text, code, visualizations, and outputs in the same place

Jupyter Lab

- A development environment for creating Jupyter Notebooks
- Install locally:
 - 1. Open a terminal and type the following command
 - 2. pip install jupyterlab
- Run Jupyterlab:
 - 1. Open a terminal and type the following command
 - 2. python -m jupyterlab
- Web interface: https://jupyter.org/try-jupyter/lab/index.html



Google CoLab

- A cloud-based environment for creating Jupyter
 Notebooks and saving and sharing them on Google
 Drive
- Google CoLab: https://colab.research.google.com/

FURTHER READINGS

- https://docs.github.com/en/get-started/quickstart/hello-world
- https://www.freecodecamp.org/news/introduction-to-git-and-github/
- https://www.atlassian.com/git/tutorials/using-branches

Thank you

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