

Coursework, projects

Extra information

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Coursework info

Data

- There is data available for both projects!
- Under Key information -> coursework data

Dog DNA coursework

- <https://biopython.org/docs/1.75/api/Bio.pairwise2.html>
- <https://biopython.org/docs/1.75/api/Bio.Align.html>
- <https://www.ncbi.nlm.nih.gov/BLAST/tutorial/Altschul-1.html>

Particle coursework

- Each of the matrix is a sub-part of a larger image, a “particle”
- Each particle should be an image of a complex of interest
- In the provided notebook, the classification function `is_this_a_particle` should tell you whether each particle is or isn't a “true” particle

Environment management

Virtual environments

- It is common to need different python environment setups for different projects
 - Example: project 1 need an old biopython version, project 2 needs the latest
- Solution: Have multiple copies of python, with their own packages
- This is called a **virtual environment** (venv)

Creating, managing virtual environments

- There are **many** different programs to create and manage them:
 - venv + pip: “official” solution: <https://docs.python.org/3/library/venv.html>
 - Very solid, easy to install, little automation
 - Poetry: <https://python-poetry.org/docs/>
 - Does it all, automation (including project setup), may not work well with other setups
 - conda, mamba, PDM, uv, pyenv, etc... are all good alternatives!