A **central entry point** for training material
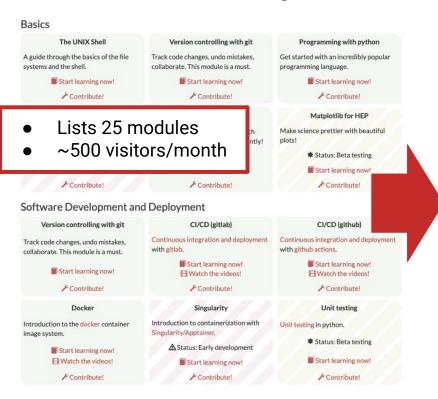
Kilian Lieret[1,2], Alexander Moreno[3]
for the IRIS-HEP/HSF Training Group

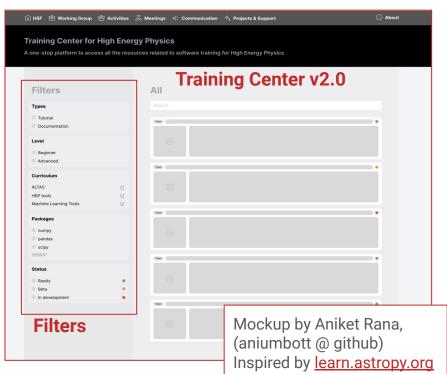[1] Princeton University
[2] IRIS-HEP

[3] Universidad Antonio Nariño

Current Training Center
Served us well, but becoming crowded

Basics

The UNIX Shell
A guide through the basics of the file systems and the shell.
🔖 Start learning now!
🔧 Contribute!

Version controlling with git
Track code changes, undo mistakes, collaborate. This module is a must.
🔖 Start learning now!
🔧 Contribute!

Programming with python
Get started with an incredibly popular programming language.
🔖 Start learning now!
🔧 Contribute!

Matplotlib for HEP
Make science prettier with beautiful plots!
✳ Status: Beta testing
🔖 Start learning now!
🔧 Contribute!

🔧 Contribute!

🔧 Contribute!

- Lists 25 modules
- ~500 visitors/month

Software Development and Deployment

Version controlling with git
Track code changes, undo mistakes, collaborate. This module is a must.
🔖 Start learning now!
🔧 Contribute!

CI/CD (gitlab)
Continuous integration and deployment with gitlab.
🔖 Start learning now!
🎬 Watch the videos!
🔧 Contribute!

CI/CD (github)
Continuous integration and deployment with github actions.
🔖 Start learning now!
🎬 Watch the videos!
🔧 Contribute!

Docker
Introduction to the docker container image system.
🔖 Start learning now!
🎬 Watch the videos!
🔧 Contribute!

Singularity
Introduction to containerization with Singularity/Apptainer.
⚠ Status: Early development
🔖 Start learning now!
🔧 Contribute!

Unit testing
Unit testing in python.
✳ Status: Beta testing
🔖 Start learning now!
🔧 Contribute!

"Central Entry Point"
Various Filters → Scales!
Inspiration: learn.astropy.org

Training Center v2.0

HSF · Working Group · Activities · Meetings · Communication · Projects & Support · About

Training Center for High Energy Physics
A one-stop platform to access all the resources related to software training for High Energy Physics

Filters

All

Types
☐ Tutorial
☐ Documentation

Level
☐ Beginner
☐ Advanced

Curriculum
ALTAS
HEP tools
Machine Learning Tools

Packages
☐ numpy
☐ pandas
☐ scipy

Status
☐ Ready
☐ Beta
☐ In development

Filters

Mockup by Aniket Rana,
(aniumbott @ github)
Inspired by learn.astropy.org

2

- Pitched as **Google Summer of Code project (proposal)**

- Ultimately didn't get funded

- Had started selecting candidates & proposals (lots of interest, O(30) applicants)

- As part of this, got **several working prototypes** that were completed in the 24-48h qualification tasks

  - https://github.com/Aniumbott/demo-training-center

  - **[private]** https://github.com/BimsaraBodaragama/gsoc-training-center-2023

  - https://github.com/developingright/Training-Center-Task

  - **[private]** https://github.com/emanuele-em/training-center

  - **[private]** https://github.com/Hetarth02/gsoc2023-cern-qualification-task

- Some of the contributors might still be interested to collaborate on this

- The topic came up in the recent pyHEP.dev workshop (discussion notes) with two more "flavors":
  - An "**analysis gallery**" to show how to **combine** the different tools of Scikit-HEP and **solve specific use cases**
  - How is this different from tutorials?
    - In tutorials we try to teach the *bare basics to everyone* in great verbosity
    - These will be more specific and terse
  - This idea has been around for quite some time (see this old issue)
  - Loosely inspired by the matplotlib gallery
  - Similar perhaps to ROOT tutorials
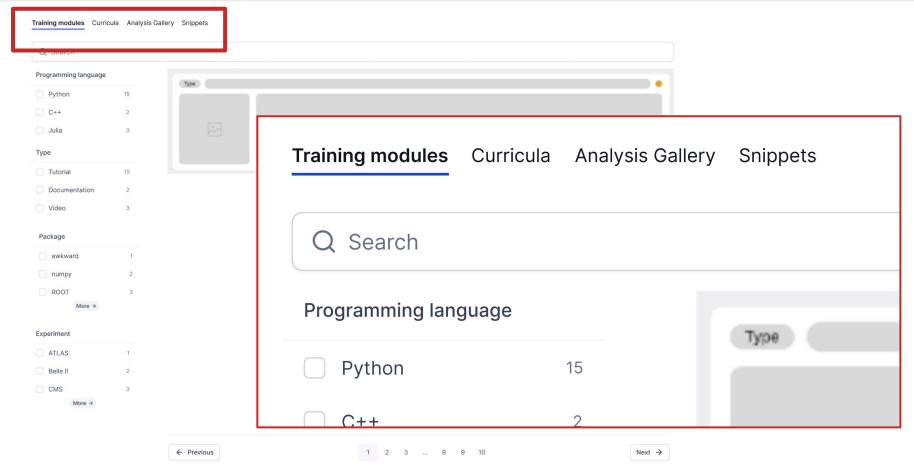 - This might be most closely related to original idea from learn.astropy.org/

- The topic came up in the recent pyHEP.dev workshop (<u>discussion notes</u>) with two more "flavors":
  - A **"analysis gallery"**
  - A **"snippets archive"** (this might have been mostly private discussion with Jim):
    - A place to store and permalink small pieces of code and explanation
    - **Use case:** Preserve all the small answers to small questions that come up often
    - **Possible alternative:** A forum that we actually all use (discussion elsewhere)
- These 3 use cases share quite a few requirements

Can we combine these?

Training modules   Curricula   Analysis Gallery   Snippets

Search

Programming language

- [ ] Python   15
- [ ] C++   2
- [ ] Julia   3

Type

- [ ] Tutorial   15
- [ ] Documentation   2
- [ ] Video   3

Package

- [ ] awkward   1
- [ ] numpy   2
- [ ] ROOT   3

More →

Experiment

- [ ] ATLAS   1
- [ ] Belle II   2
- [ ] CMS   3

More →

Type

← Previous   1 2 3 ... 8 9 10   Next →

Training modules   Curricula   Analysis Gallery   Snippets

Search

Programming language

- [ ] Python   15
- [ ] C++   2

Type

	Tutorials	Gallery	Snippets
Filters	same		
How is material hosted	Off-site and only linked	[TBD] Jupyter notebook, Markdown, or off-site	Markdown (?)
Alternatives		Simple Jupyter book (no filtering), possibly	A forum
Prototypes / inspiration / implementation	Already have prototypes	learn.astropy.org	?

Today

Proposal: Fix scope and goals

Mock up: Can modify figma template

Starting point: Look through existing solutions/frameworks

Start implementation