# First meeting with the Artificial Intelligence Sustainability Lab at HNEE (KIN'L)

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**Eberswalde University for Sustainable Development**

# What's the KIN'L?

Artificial Intelligence Sustainability Lab at Eberswalde University for Sustainable Development (KI-Nachhaltigkeitslabor, KIN'L@HNEE). The Federal Ministry of Education and Research (BMBF) is funding the establishment of an AI sustainability laboratory at HNEE as part of the KI-Nachwuchs@FH funding guideline. The endeavour is centered on the acquisition of an AI computing system for use in teaching, research and transfer.
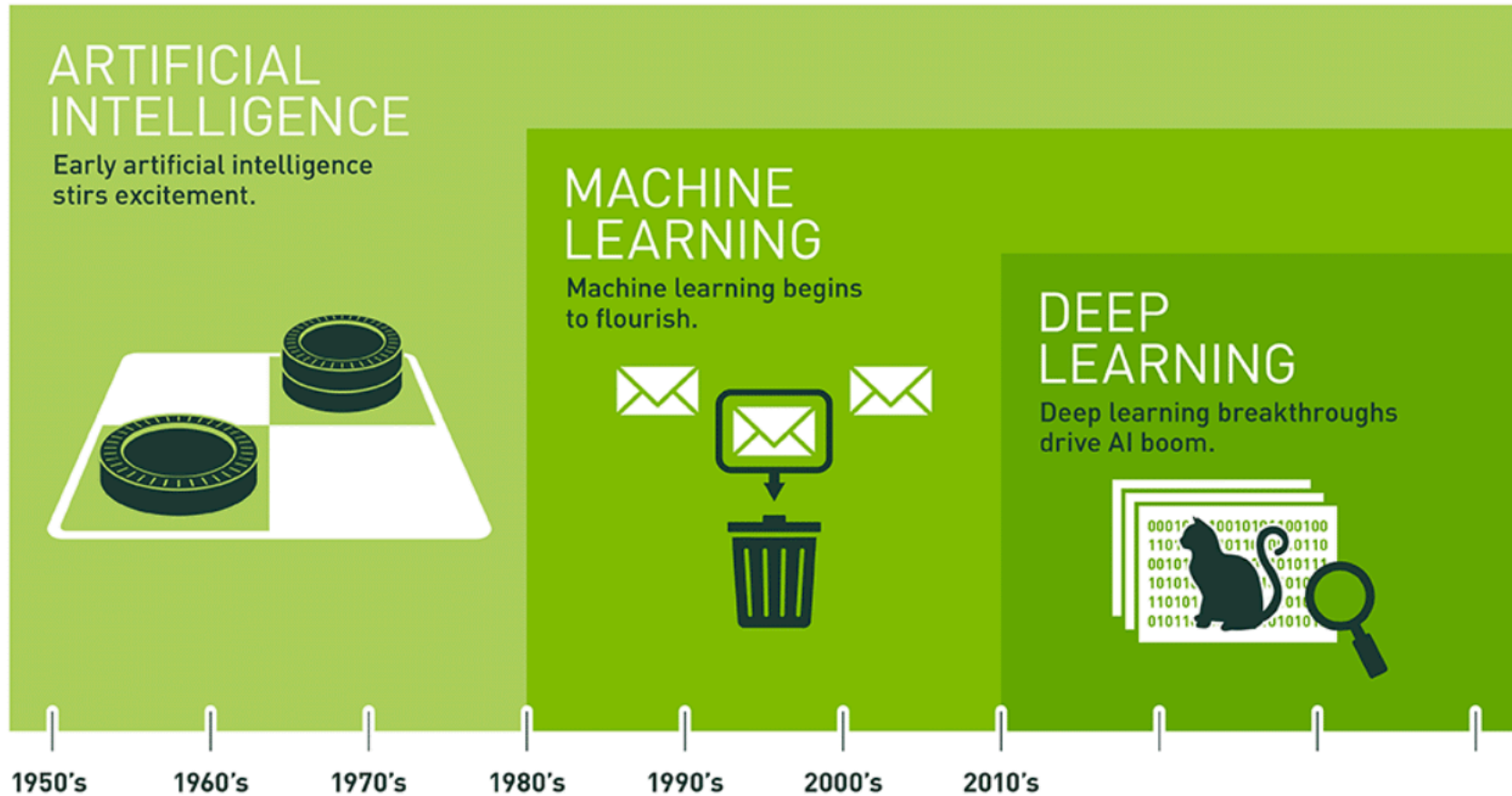
- April 1st 2023 to April 30th 2025
- Funding body: BMBF
- Contact person: Peter Neumeister

GEFÖRDERT VOM

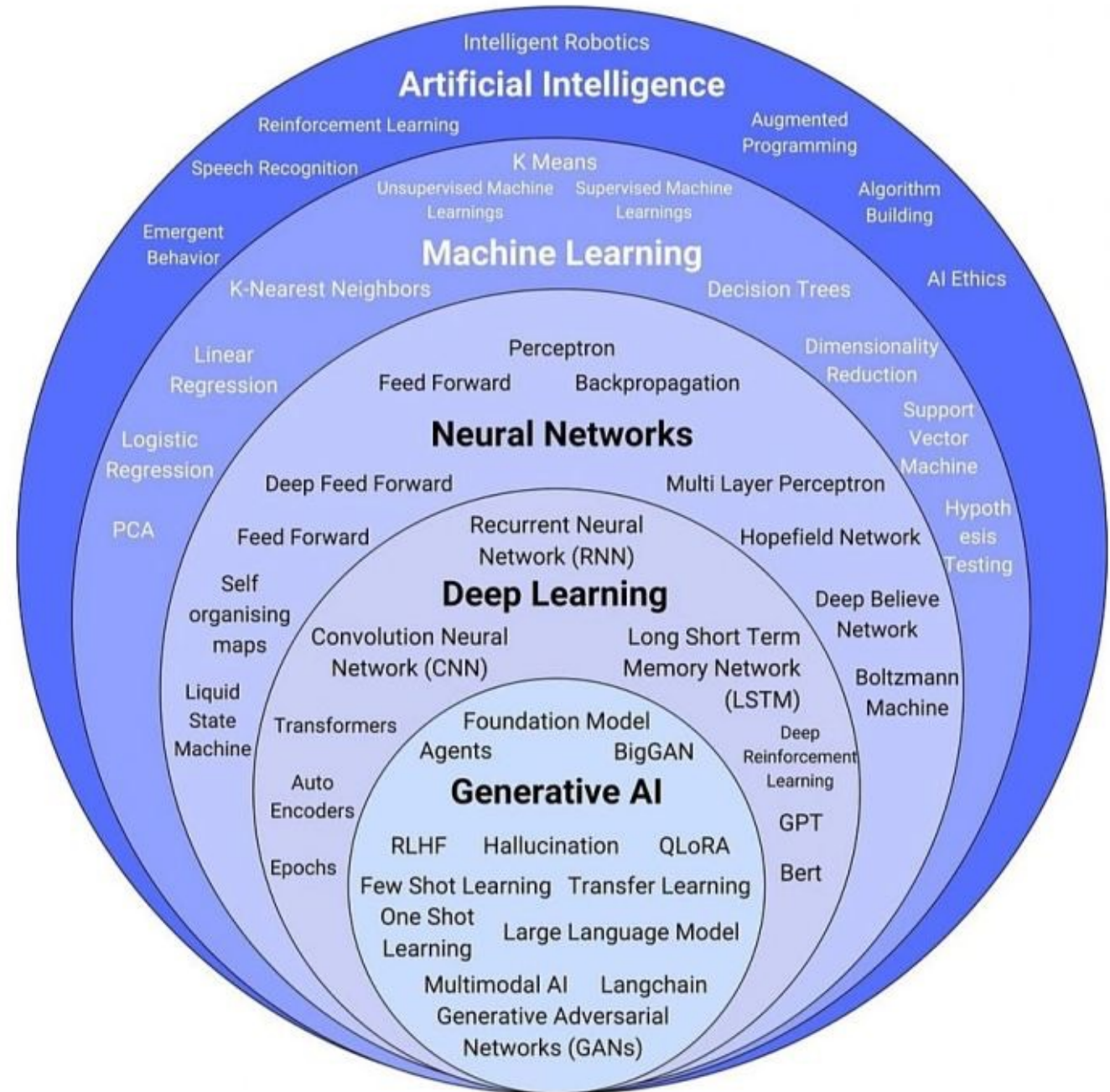Bundesministerium für Bildung und Forschung

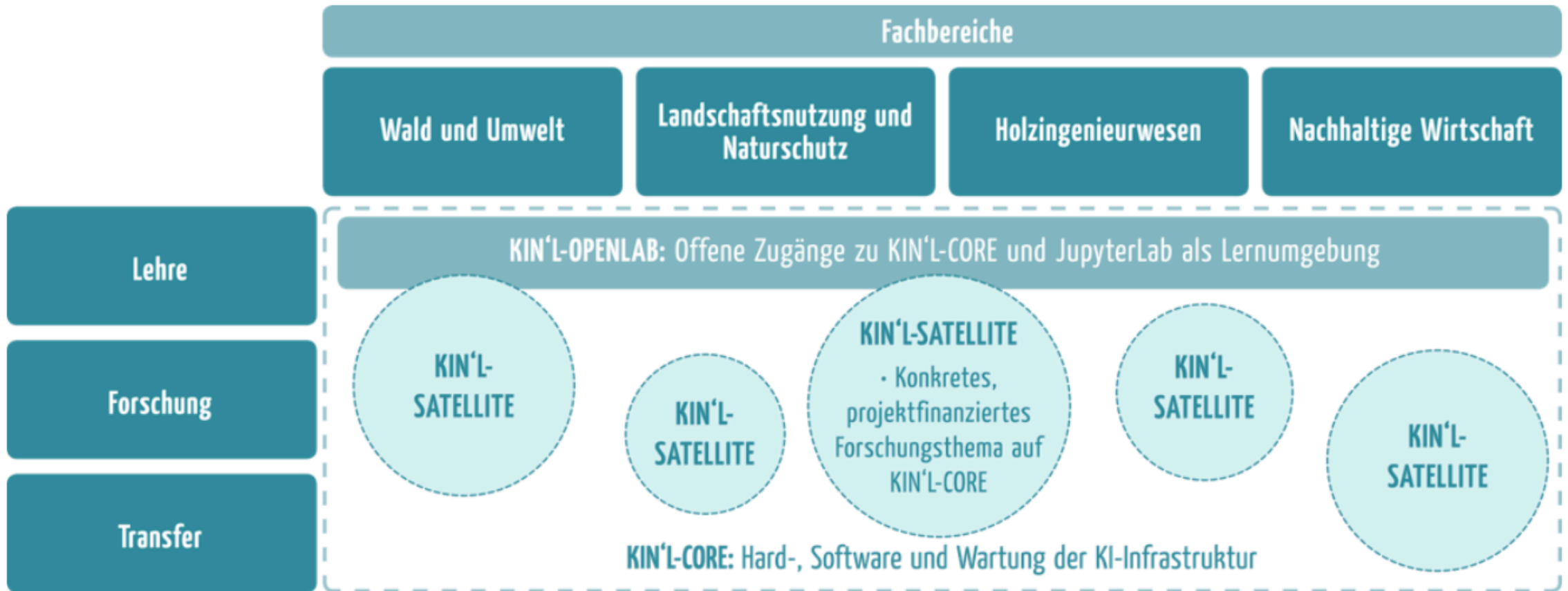# Artificial intelligence (AI), machine learning (ML), deep learning (DL)



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# AI, ML, DL



The World of **Artificial Intelligence**

# KIN'L into the HNEE

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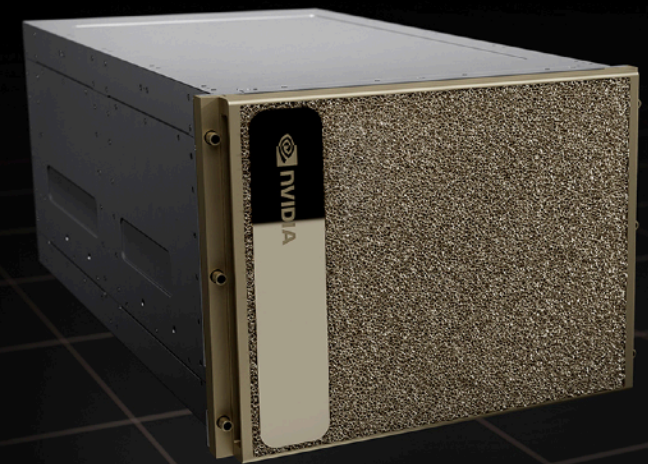# KIN'L-CORE Hardware: NVIDIA GPUs

- 8x NVIDIA H100 Tensor Core GPUs
- 640GB total GPU memory
- 2TB RAM system memory
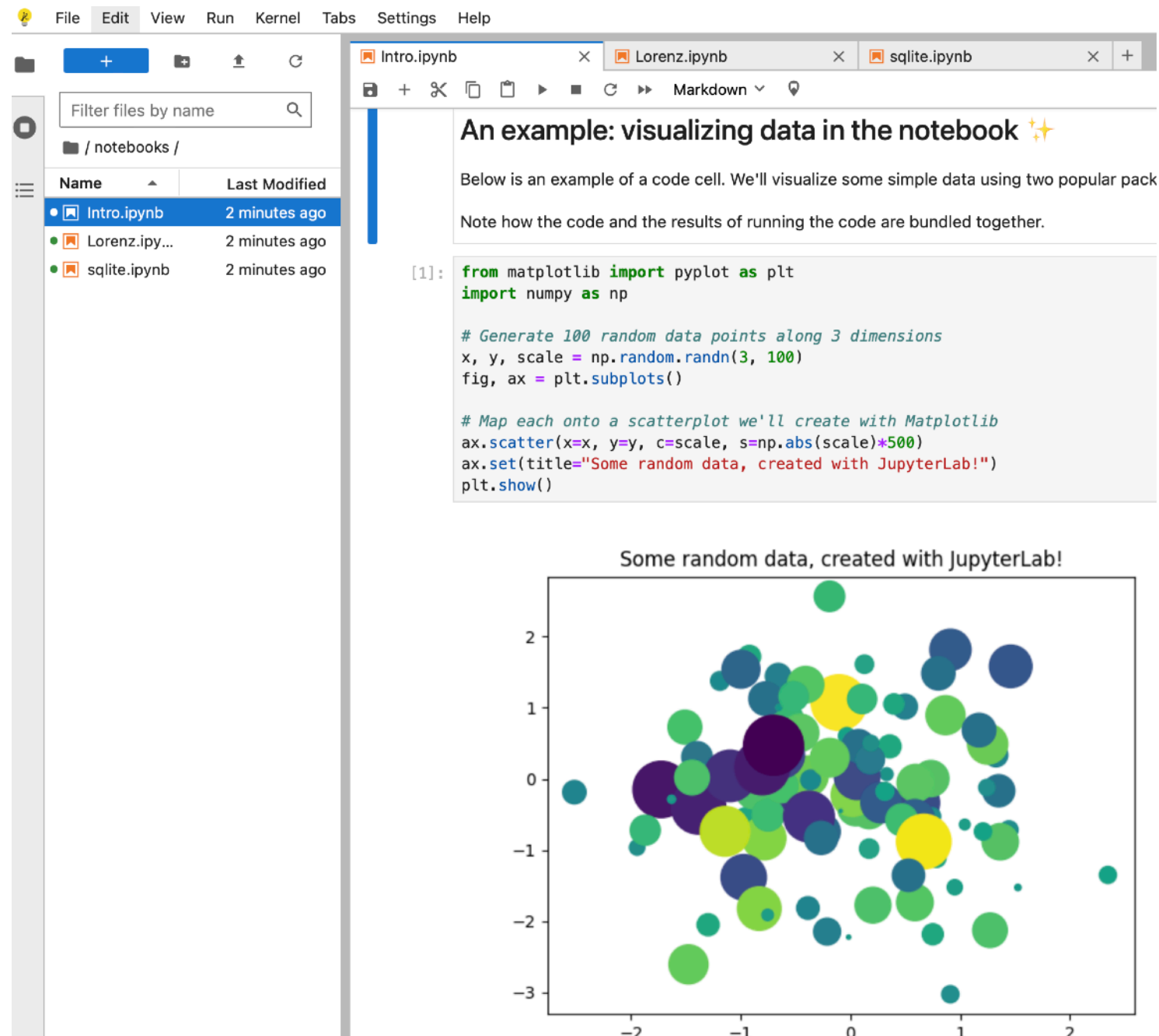- Networking up to 400Gb/s InfiniBand/Ethernet
- Storage with 500TB NVMe SSDs



**NVIDIA DGX H100**

The gold standard for AI infrastructure.

# KIN'L-OPENLAB
## Software: JupyterLab

- Web-based interactive development environment

- Flexible interface to configure and arrange workflows

- Modular design to enrich functionality

# Python



# Python (programming language)

Article   Talk

From Wikipedia, the free encyclopedia

**Python** is a high-level, general-purpose programming language. Its design philosophy emphasizes code readability with the use of significant indentation.[33]

Python is dynamically typed and garbage-collected. It supports multiple programming paradigms, including structured (particularly procedural), object-oriented and functional programming. It is often described as a "batteries included" language due to its comprehensive standard library.[34][35]

Guido van Rossum began working on Python in the late 1980s as a successor to the ABC programming language and first released it in 1991 as Python 0.9.0.[36] Python 2.0 was released in 2000. Python 3.0, released in 2008, was a major revision not completely backward-compatible with earlier versions. Python 2.7.18, released in 2020, was the last release of Python 2.[37]

Python consistently ranks as one of the most popular programming languages, and has gained widespread use in the machine learning community.[38][39][40][41]

# Deep learning libraries

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# Hands-on, practical examples

- A JupyterLab example of handwritten digits recognition from the MNIST database using PyTorch

- Local Large Language Models like Llama3 contrasted with ChatGPT

# Let's talk!

- We want you to be part of the **KIN'L-Satellites**
- AI use cases in your:
  - Teaching
  - Research
  - Transfer
- Potential to apply for grants and funding
- Other ideas

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# Any further questions? Please get in touch with us!

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**(Work in progress)**