Hackathon introduction

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Development environment — Local installation

By installing and testing GraphNeT in your preferred working environment, you'll be sure that you can keep working and contributing after the workshop.

Procedure:

- Fork the repository
- Install GraphNeT
- Access the provided material (data, notebooks, etc.)

See Setup presentation from Day 1.

Datasets

Example hackathon datasets are provided as SQLite databases — on the the file formats supported by GraphNeT for training GNNs.

```
$ python inspect_data.py --all  # --help
```

IceCube-specific

- **OscNext:** 481K low-energy ν_e, ν_μ, ν_τ, and μ events in IceCube-DeepCore
- **Upgrade:** 500K low-energy ν_e, ν_μ, ν_τ, and μ events in IceCube-Upgrade
- **Northern Tracks:** 500K high-energy up-going ν_μ CC + NC events in IceCube + DeepCore

Generic

- **Kaggle*:** 800K events of various neutrino types and “junk” in IceCube geometry
- **Prometheus:** 400K ν_μ CC events in ORCA-150-like geometry

Use the provided `notebooks/` as a jumping-off point to study the data!

*__NB:__ By the terms of the competition, data from Kaggle must not be shared publicly outside the Kaggle platform.

Potential hackathon topics and group assignments

https://miro.com/app/board/uXjVMP4T6lg=/?share_link_id=294132443594

NB: Presentation of hackathon results on Thursday morning