Introducing NanoDL: A Library for Building Custom Transformer-based AI Model.

An open-source Python library for building GPU/TPU-accelerated transformer models, offering custom layers, data-parallel trainers, and more.

NanoDL Logo

LONDON, LONDON, UNITED KINGDOM, February 1, 2024 /EINPresswire.com/ -- The developer version of NanoDL is now live. NanoDL is an innovative and versatile library crafted for developing transformer models within the Jax/Flax ecosystem. This initial release marks a significant step forward in transformer model development, offering a suite of tools and features designed to enhance and streamline the building process.

Key Features of NanoDL include:

- Extensive Range of Model Building Blocks: NanoDL offers a wide array of blocks and layers, facilitating the creation of customized transformer models from scratch.

- Comprehensive Model Coverage: The library includes an extensive selection of models like LlaMa2, Mistral, Mixtral, GPT3, GPT4 (inferred), T5, Whisper, ViT, Mixers, GAT, CLIP, and more, catering to a variety of tasks and applications.

- Data-Parallel Distributed Trainers: With NanoDL, developers can efficiently train large-scale models on multiple GPUs or TPUs, thanks to its data-parallel distributed trainers, which eliminate the need for manual training loops.

- Dedicated Dataloader for Jax/Flax: The library comes equipped with a specialized dataloader, making the process of data handling for Jax/Flax more straightforward and effective.

- Unique Custom Layers: NanoDL introduces custom layers not found in Flax/Jax, such as RoPE, GQA, MQA, and SWin attention, allowing for more specialized model development.

- GPU/TPU-Accelerated Machine Learning Models: It also features GPU/TPU-accelerated classical ML models like PCA, KMeans, Regression, Gaussian Processes etc., akin to SciKit Learn on GPU.

- Flexibility for Hybrid Model Creation: NanoDL's modular design empowers users to blend elements from various models, such as GPT, Mixtral, and LlaMa2, to craft unique hybrid transformer models.

- Advanced NLP and Vision Algorithms: The library includes a range of advanced algorithms for NLP and computer vision tasks, such as Gaussian Blur, BLEU etc., showcasing its versatility and depth.

NanoDL is not only a powerful tool but also open-source and community-driven. This developer version of NanoDL is now available on PyPI for installation. Feedback and contributions from users are encouraged, to continuously improve and expand its capabilities.

Checkout the repository for sample usage and more details:
https://github.com/HMUNACHI/nanodl

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