

The Helmholtz Model Zoo: Enabling AI Model Sharing and Inference in the Helmholtz Cloud

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The Helmholtz Model Zoo (HMZ) is a cloud-based platform providing remote access to deep learning models within the Helmholtz Association via web interface and REST API. Scientists from all 18 Helmholtz centers can contribute models through a streamlined GitLab submission process, with HMZ automatically generating the interface, testing, and deploying the model.

HMZ runs on GPU nodes at DESY Hamburg using NVIDIA Triton Inference Server, ensuring data sovereignty by keeping all data within the Helmholtz Cloud. The platform offers unrestricted inference capacity with fine-grained access control through Helmholtz Virtual Organizations, and supports external researcher collaboration. Development is led by the Helmholtz Imaging Support Team at DESY with support from HIFIS and Helmholtz AI.

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