

## WS34 - Deep Learning in heterogenen Datenbeständen

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**Abstract:** Deep learning techniques, especially artificial neural networks, have become irreplaceable in almost every aspect of modern information science. Breakthrough technologies evolve rapidly, driven by researchers with both, scientific and economic backgrounds. This workshop is a platform for students, post-docs, innovative enterprises and experts from Germany who present their latest works and demo applications. Recent advanced in the field of deep learning and their impact on research projects and economic endeavors are at the center of submitted papers and presentations. An active debate focusing on current work-in-progress, future research as well as chances and opportunities of deep learning is complemented by the discussion regarding the generation, processing and publishing of large heterogeneous datasets for research purposes.

The presented contributions span a wide variety of deep learning applications – from robotics to audio and text retrieval, from human pose estimation to medical data processing. This not only demonstrates how important deep learning techniques have become for almost every area of research, it also shows the importance of scientific transparency. Without the efforts of countless researchers around the globe who published their work and complemented it with code repositories and extensive documentation, some of the presented applications could not have been implemented. This reminds us: An active deep learning community is vital for the success of innovative data processing routines and with that, forms the foundation of a steady evolution powered by scientific research.

We would like to thank everyone who participated in this workshop, especially the authors and presenters who contributed to the success of this novel format.

**Keywords:** Convolutional Neural Networks; Evaluation; Data Sets; Ophthalmology; Human Pose Estimation; Acoustic Event Classification; Actor-Critic Architectures; Word Embeddings

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