

## **Abstract**

In recent years, artificial intelligence has made it possible to solve complex problems impressively better than with classical solutions. Especially in the field of consumer electronics, there are many examples for the rapid extension of this technology.

In order to investigate the performance of neural networks, different approaches to the categorization of TV shows based on their descriptions and other metadata are modelled and implemented. For the determination of a proper AI framework, different candidates are compared and the most suitable one is selected for the training of the networks. An extensive database with already categorized TV shows serves the data for the training. The measurement and evaluation of the achieved categorization quality is then carried out with metrics tailored to the application case.

To assess the usability in consumer electronics devices, the most appropriate neural network is transferred to an embedded platform, on which the occupied resources are analyzed. The network and the execution layer are then optimized for the underlying hardware. Finally, it will be discussed, which further optimizations can be achieved.