

Edge Computer Vision for Real-Time Applications

research project or bachelor/master Thesis

Research field

This research contribution encompasses several key areas of advancement in image processing and AI. It focuses on the development and implementation of real-time image processing techniques on embedded systems, particularly leveraging FPGA and System on Chip (SoC) technologies.

Research topic

The research aims to optimize algorithms for performance and efficiency, enabling high-speed processing of visual data in resource-constrained environments. By integrating machine learning models, the work seeks to enhance the capabilities of embedded systems in tasks such as object detection, recognition, and scene understanding. The research also explores the challenges and solutions related to hardware-software co-design, ensuring that the algorithms are not only effective but also feasible for deployment on embedded platforms.

Required Skills

- programming skills: C, C++, Python, matlab
- basic knowledge in image processing and image coding
- fundamentals of machine learning and neural networks
- basics in embedded systems and FPGA programming

Contact



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